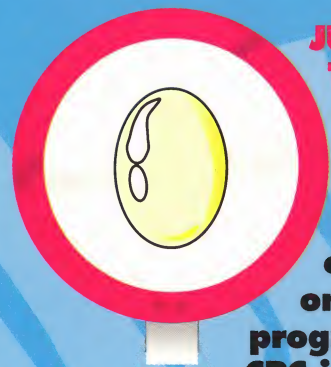


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ISSUE No.108
SEPTEMBER 1994
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**AMSTRAD
ACTION**

**SEPTEMBER
108**

Line-up

REGULARS

4 Letters

What have you lot got say for yourselves this month? There's news from Sydney, a message from the author of Music Maker and lots of other strangeness.

8 Amscene

We log on to the CPC news net to download the latest news from the CPC scene.

9 Subscribe!

Your last chance to subscribe at our incredibly low, limited offer rates. Miss it, and you'll kick yourself (probably).

12 Back Issues

Our back issues are selling out seriously quickly. Don't miss out on your chance to plug those holes in your collection.

24 Reader ads

You want it? Someone's got it. The burning question is, are they advertising it in our reader ads section?

SERIOUS STUFF

13 Basically Basic

Radical's Rob Buckley and CPC Contact's Angela Cooke take over our regular Basic tutorial series.

14 Techy Forum

Richard Fairhurst tackles more tough techy teasers.

20 So why do you need a multiface?

The first of a new series on essential hardware.

21 Assembly Line

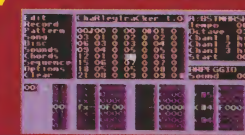
The Hairy One's handed over the writing chores on our monthly Machine Code tutorial to a new bod as well.

22 Type-Ins

For DIY listings enthusiasts everywhere.

34 Preview: ChaRleyTracker

Will this new music package give Soundtrakker a run for its money? It's a fraction of the price.



18 Review: RoutePlanner

They said it could never be done, but Richard Fairhurst doesn't know the meaning of never (buy the man a dictionary - Dave). He's produced the CPC's very own answer to AutoRoute. Will it keep you on the right track or drive you around the bend?



LEISURE ZONE

25 Reviews: Further Reading

Fanzines, and how to love them.

26 Reviews: Public Image

Life isn't cheap, but Public domain software is.

Star Drivers: that lot watching are just waiting for a crash.



28 Adventures: The Examiner

It's back up to two pages for the world's greatest monthly adventure news and views section.

30 Cheat Mode

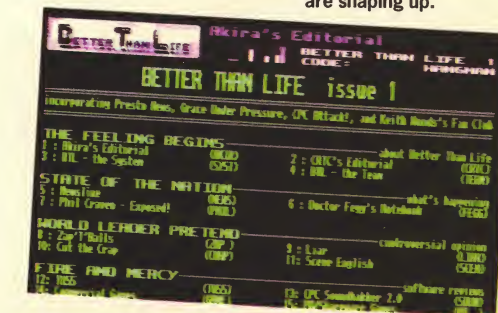
More CPC tips, cheats and hints than you could shake a very large, slightly gnarly stick at.

33 Preview: Star Driver

Sci fi racing action from the man who brought you Masters of Space (reviewed last issue).

33 Preview: Better Than Life

The diskzine that seems to have been longer in the making than Jurassic Park is nearly here. Will it blow the socks off the European 'zines? We see how things are shaping up.



Check out what's on this month's covertape...

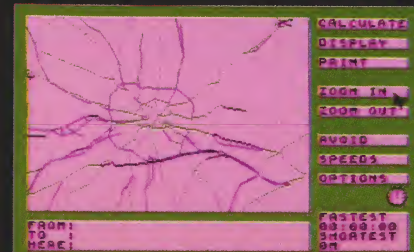
Fantasy World Dizzy

The evil wizard Zaks has kidnapped Daisy and Dizzy has to go to the rescue. Okay, the plot's about as original as 4.2 Children's but the game's one of the best Dizzy adventures ever.



Route Planner demo (128k)

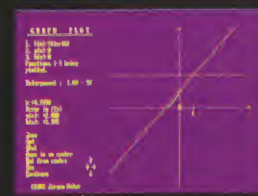
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roads-only edition of one of the most impressive CPC programs of the year.

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Reaction

rival, relatively new outfit which had some heavy financial backing.

True, they developed its architecture and styling, but

they chose to put a new 3-inch disc drive on it while everybody else at the time used 5.25-inch and 3.5-inch disc drives. This is what effectively killed the Speccy² and production was ceased and development of games fizzled out. This left a couple of million Speccy owners gobsmacked and they were forced to buy the rather lacking in processor power CPC464³.

As for your comments on the Amiga, ST and the Mac, well you're off your head.⁴ And do you really believe the 464 is better than an Amiga, because I think you'll find an Amiga 4000/040 25MHz with a video toaster and a 2.5 gigabyte external SCSI II drive and its tower come in just a little bit longer than a crappy 464, don't you?⁵

Why don't you come off your perch? Stop being so big headed and ignorant and

Back! Back! Back! BACK!

I had read AA for a few years, but last year I stopped. I have now

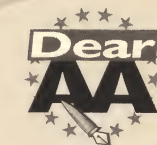
started again as my doubts

about magazine quality have been extinguished. AA is great! I have one or two questions/suggestions:

- 1 Can I order disc versions of covertape from ages back or only recent ones?
- 2 If the answer was yes, do I need to send off separate envelopes for each disc?
- 3 With all the relevant disc tokens?
- 4 Another cart round-up, possibly with longer reviews than in AA89, would be very gratefully received, at least by me.
- 5 I don't know how complete your Amscene Directory is, but I find it very useful.

Thank you for a great magazine. I will stick by you now to the bitter end.
RJ Dalton, Salisbury

The Directory probably isn't as complete as it could be, but we rely to a large extent on people keeping us informed and up-to-date when it comes to things like fanzines, user groups and PD libraries. So if you know any info that ought to be included in or deleted from the Directory, please get in touch. Dave



Mad, bad and not somebody you want to know

I would like to point out a few facts concerning your

article on '10 Years Of The CPC464' in AA104.

You see, the point I have to make is about your comment that the Spectrum's architecture is like a Skoda.

I would like to bring to your attention the fact that in its time the ZX Sinclair Spectrum was a very powerful, fast machine with an enormous 128k of ROM. At its height it outsold every other home computer around the globe. A few years later Sinclair were bought out by a certain company called Amstrad (you may have heard of them) - a

Defining the problem

Congratulations on a very comprehensive and perceptive article on the issues currently involved in the CPC Public Domain scene. As asked for, here is a response from me as a frequent user of software from the UAUG and other libraries and small publishers.

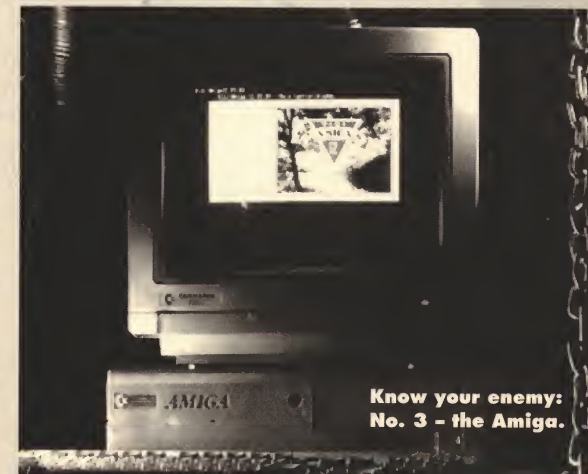
I think the problems raised can be resolved by trying to agree what is PD and what is Homebrew. Both terms are common - we just need to agree what they mean. I understand that programs placed in the public domain are meant for unconditional distribution at no charge with a nominal copying fee allowed. Homebrew means to me that the author reserves rights of limited

distribution and may allow or require a fee to be charged for the program itself. Homebrew supported by the author through upgrades or documentation is shareware, but let's leave that for discussion another day.

Once an author decides that these are fair definitions, classifying his or her program to be distributed in the preferred way becomes easier. There is no shame in not being PD, though some seem to suggest it is the only right-on description. There are advantages to each side of the CPC's low cost mixed economy and companies on the way up or down may pass through the homebrew category. If the price or quality of a library's service is substandard (and the word soon gets around through Amstrad Action and the CPC fanzines) the bad ones

will eventually disappear, just as in the commercial world. It may take a while, but that's life. I have been very pleased with the overwhelming majority of programs, demos and clip art from the libraries I have used and their service is generally pretty good, especially as most are part-time enterprises.
Brian Watson, Ely

Strangely, homebrew software seems to be becoming less popular on the CPC, while some very good software is being released as PD. The exact opposite is the case on the C64 where independent developers are flourishing while the PD scene is about as exciting as an in-depth study into potato blight in 19th century Russia. Personally, I think that the term homebrew should be altered to something else like, such as 'indie software'. The word homebrew just sounds so cheap and cheesy, I think it actively puts some people off buying the stuff. Dave



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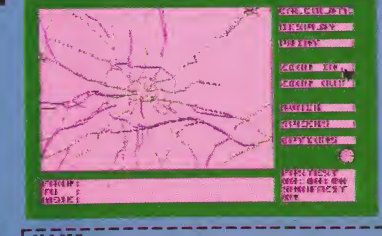


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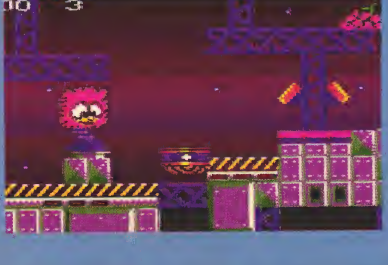
"Fantastic graphics and gameplay are some of this games outstanding features - 86%" - Amstrad Contact Review



FLUFF (Any Plus)

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Help Fluff rescue her children who have lost themselves in the terrifying Fluffland. 12 Zones of hardcore scrolling action and stunning graphics go to make this the nearest thing to console action that has ever appeared on a Plus machine. "As a game it's hugely enjoyable" "Fluff is an impressive piece of coding which shows off the Plus at its best" - Amstrad Action Review 90%



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Dear
AA

Short Sharp Shocks

● What happened to that level of *Fluff* you promised in AA105?
James Pinnion, Spilsby

Technical problems prevented it from being ready in time. We still hope to feature it on a covertape soon. **Dave**

● Spriting Back – I don't know what it is, but it's certainly colourful.
John Jones, Newbiggin-by-the-Sea

We aim to please on a variety of different levels and planes of consciousness. Er, perhaps we ought to invite its illustrious author, Simon 'Hairy' Forrester, back for an in-depth feature on how exactly to use the thing. **Dave**

● Please would you tell me what 'Schneider' is? Is it just a foreign name for the CPC?
Robert Smith, Anglesey

Schneider is indeed the German name for the CPC. It is also known in various parts of the world as Orion, Triumph, AWA, Solavox, Saisho and ISP. **Dave**

● Hi! My name is Chris Spicer, and I'm writing to tell you about my new tape-based fanzine *TECH-MAG*. *TECH-MAG* is programmed using the GAC...
Christopher Spicer, Nuneaton

Go north for a game review? This we have got to see. **Dave**

● Can you get Windows for the CPC?
John Adlington, Melksham

Nope, that particular interface system is designed for the PC only. But who needs Windows when we've got DES from Campursoft? **Dave**

● Are you trying to phase out that gorgeous Hairy person?
Karen Beardsley, Ashford

Nope. We're not trying. We've succeeded (although I bet he'll be back). **Dave**

admit that the 464 and all 8-bit Amstrads (possibly even Amstrad's PCs) are all of a low technology, outdated, poor capability quality (*don't mince your words – Dave*). Basically you're just jealous because everybody else can accept that the Speccy ruled⁶ and that reign has now passed on to the new generation of high-end Amigas.⁷

So stop being so sad and admit that the CPC464 was a piece of crap then, and it's not even worth the effort to talk about now.⁸ A proud Commodore Amiga and Speccy owner, **Sheffield**.

PS I wouldn't touch an Amstrad PC, or any PC for that matter, if you paid me – they're all crap, about as user friendly as my bank manager and as powerful as my little finger.⁹

Right, before I rip this letter apart (with the minimum of effort), let me just apologise to 'Proud' for having to paraphrase a lot of his points – the rant was pretty incoherent in places. He even put his PS before his name. Jeez. I know I shouldn't rise the bait, but there really are so many completely ridiculous claims in the letter, they're just begging to be blasted down. So, get belted in, this is going to be a bumpy ride.

1 Sinclair wasn't just bought out because Amstrad had more financial clout (by the way, Amstrad had been around since the late 60s, making the company at least 10 years older than Clive's lot). Sinclair, basically, had released a series of seriously unpopular products and were ripe for a takeover. So Amstrad took the Spectrum and spent millions on promoting it while virtually ignoring the CPC. So you could actually blame the CPC's lack of development on the fact that Amstrad were trying to flog a dead horse.

2 The C64 had a 5.25-inch disc drive and that computer is sadly no longer with us. So the 3-inch drive argument holds no water, I'm afraid. The Speccy died because it was a terminal case.

3 Hang on, one irrefutable fact is that the CPC had far superior processing power to the Speccy. No argument.

4 The man appears completely bereft of humour, as well.

5 Well, if you're just going to stick on peripherals to prove a point...

6 I'd like to see you prove that boast. I think there are more than a few BBC and C64 fans, as well as devout CPCers, who would disagree with you there.

7 Commodore's recent financial troubles and voluntary liquidation seem to suggest the Amiga isn't quite such an all-conquering computer as you might suggest.

8 Isn't it strange how there's still a CPC mag going strong when all the Speccy mags vanished years ago? The CPC still seems to be worth writing about.

9 Admittedly DOS for PCs might not be friendly, but it's far more logical than the Amiga's stunningly incomprehensible Shell

system. And Windows is undeniably easier to use and more flexible than the Amiga's rather utilitarian front-end.

By the way, nice to know you read a magazine devoted to a machine you obviously loathe and that we really managed to get under your skin. **Dave**

Dear
AA

Rip Off

1 Where have all the pages gone? Only 34 pages! Rip off!

2 Where can I get Lemmings on disc?

3 Which is the best – *Super Cauldron*, *Prehistorik 2* or *Titus The Fox*?

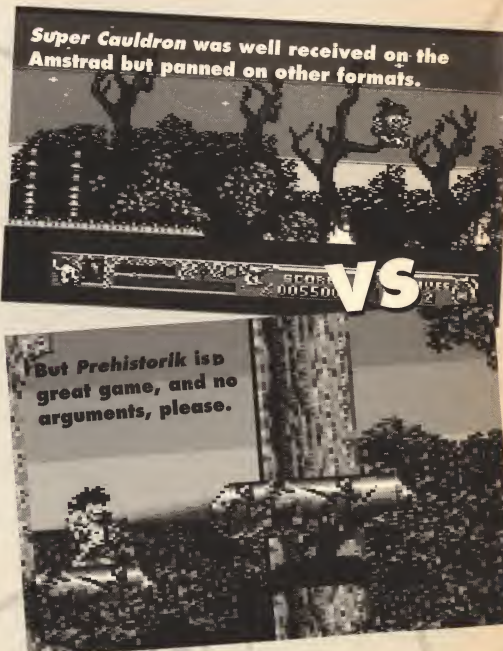
4 Where can I get a new CPC6128 Plus?
Stephen Rich, Harpenden

1 Er, well two of them never went away. We've actually got 36 pages, and we're proud of every one of 'em.

2 Your first port of call should be Software Cavern (☎ 0628 891101) which claims to have the largest collection of 8-bit software in the country, and if you get no joy there why not try... wait for it, wait for it... the AA Reader Ads service (page 24).

3 *Prehistorik 2* just takes the honours over *Super Cauldron*. *Titus The Fox* was never really in the running – it's no great shakes.

4 Try out *The Trading Post* (☎ 0952 462135). You never know your luck. **Dave**



Dear
AA

Swelling in the ranks

I am writing to express our thanks to you for publishing the letter sent to you from the Sydney

Amstrad Computer Club. Since then, we have received numerous inquiries from CPCers around Australia and New Zealand. We had no idea until now how many CPC users there are down under.

We have enhanced our membership as many CPCers have taken advantage of our library, advice and good will. Many new members have already started communicating with our club for information on their problems, which we are only too glad to solve. We aim to have free exchange of ideas, hints and tips to help all members get the maximum from their CPCs.

Some of our members are using PCs at work or at home, and one of our members has stumbled across an emulator program which converts the PC so that most of the games and programs from the CPC can be played on the PCs. It is very satisfying to see the CPC opening screen on a PC.

At our recent meeting we decided to submit programs developed by members for AA type-ins or for your covertapes and you may see some coming your way in the near future (*sounds good to me – Dave*).

Once again, thank you very much for the free plug. We appreciate it.
Derek Chaves, The Sydney Amstrad Computer Club, Australia

Glad to be of service, Del. It's great to hear that the CPC doing so well down under. **Dave**

Dear
AA

It's what's inside...

I was initially most upset to be handed a somewhat shrunken version of my favourite mag. First

impressions can be a bit misleading, though, and full marks for cramming what remained with good stuff.

The circulation of the mag seems to have slipped a bit of late. There must be a lot of CPC owners who don't buy AA on a regular basis (I was one) but how can you attract their attention? Perhaps you should start a suggestion box.

I liked your piece on printers in AA106, but how about taking this a bit further with details on print enhancement programs to push our dotty printers to their limits?

And a message to Keith Woods who does Public Image – the freebie *DES* demo prompted me to acquire a copy of the PD *EasyDOS DESK* program from Sheepsoft. Although not so quick as the commercial WIMP system, *DESK* is fairly easy to use and has decent graphics. The accompanying formatter and un-erase programs are very user friendly.

So please continue to review serious public domain programs because we don't

all like to play games (well, not all the time). Keep up the good work.
David Noakes, Rochester

This is what happens when you ask an art editor to find a picture of Sydney.



Reaction is a suggestion box of sorts. And yes, despite the fact that we refuse to put Type-Ins back on the covertape (let's not get back into that argument) we do listen to what you lot have to say; that's why *The Examiner* (page 28) is back up to two pages, for example. So use Reaction to let us know what you think we should be doing in the mag. **Dave**

Dear
AA

Music for programmers

If you give a music package to a reviewer who is both a programmer and a musician he will

invariably review it from the perspective of a musician trying to create his own melodies. In reply to the review of *Music Maker* in AA106 I feel I must point out that *MM* was written for programmers, NOT musicians, and is intended to be used to copy existing music – NOT create new tunes. Let me explain...

MM is intended for people who enjoy writing programs and who would like to add tunes and sound effects. It is particularly useful for people who have no knowledge of music but would like to take sheet music (from the local library, say) and simply enter it onto the CPC. The instruction manual provides sufficient information to enable anyone (with or without musical knowledge) to produce decent music on the Amstrad.

The emphasis towards programmers is more apparent when you take a look at the driver program which is one of the most powerful and flexible around.

Finally, some info for prospective buyers, *MM* is Plus compatible and is available on 3.5-inch disc or tape only. However, *Reveal Software* will copy *MM* to 3-inch disc if you send one along with your order.

Mark Payne, Reveal Computer Software, PO Box 1818, Redditch, Worcs, B97 4AZ.

Point taken, Mark. But whatever short-comings you think our review had, you've got to admit that generally we gave *Music Maker* a thumbs up. **Dave**



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Amscene

What's hot and not what's not on the CPC news front.

State of the scene



AA Editor, Dave Golder - if you see him in the street, be kind.

When you find a program like *RoutePlanner*, you really wonder why more programmers haven't taken advantage of the CPC's capabilities. If someone had said a year ago that an *AutoRoute* for the CPC would be released, most people would have laughed, either a) because they didn't think that it was possible or b) because they thought it was possible, but so downright complicated to program for the CPC that nobody could be bothered.

Well, someone was bothered. Richard has done a great job. The program isn't perfect, but it is still a damned impressive piece of coding. And unlike with games where that is a euphemism for 'worthy but dull', in this case an impressive piece of coding is the best way to describe it.

I hope it sells well. And I hope it encourages other programmers to turn their pet projects into reality. If more stuff like this is produced then people are going to start taking the CPC seriously again. As I said before, it is not a perfect program, but it is an example of the sort of thing that should be coming out for the CPC, rather than yet another disk operating system or back-up utility. It has wider appeal. And it works. And it does something useful. *RoutePlanner* could turn out to be the most important CPC release for a very long time. Let's hope so. **Dave**

SD re-release 3.5-inch drive

The SD Microsystems 3.5-inch disk drive is back in production.

Steve Denson of SD reckons that the these are the only 3.5-inch drives available with a two-way switch. They provide 800k per disk and also come with heavy duty power supply, utility software and a pack of 3.5-inch disks. All this lot will set you back a mere £79.95 plus £5 for delivery within the UK (contact the company for details of overseas delivery).

SD Microsystems are also planning some new software releases pretty soon, but are keeping things under wraps at the moment. But they are on the look-out for more new serious software, so if you think you've written anything of marketable value get in touch.

The company has also worked out its differences with Ultra (reported last month) and any problems people have had ordering goods from Ultra should be cleared up soon. Denson is now satisfied that it is safe for customers to order SD Microsystems goods from Ultra.

Contact SD Microsystems at PO

My god, it's full of ads...

8-Bit Mart is a new mail order mag devoted to the 8-bits. And when we say mail order, we don't just mean you have to send away to get it; it's actually stuffed full of adverts for mail order companies and small classified ads. An expanded AA reader ads, I suppose.

So if you're after some software or hardware that you just can't get in the shops, 8-Bit Mart looks like it could be a good place to turn to.

The first ish is out on 1st September. Normally it'd cost

you four first class stamps, but as a special offer to AA readers, editor Brian Watson is offering you a sample copy for just two first class stamps. That also entitles you to a free small ad in one of the following sections: for sale, wanted, help and miscellaneous.

So if you want to get an issue, or if you want to find out about advertising rates contact Brian Watson, Harrowden, 39

High Street, Sutton-In-The-Isle, Ely CB6 2RA ☎ 0535 777006.

FOR SALE

Box 24, Swaffham, Norfolk PE37 7UE ☎ 0760 720381.

We can work it out

STS is also offering a free service which will modify any disk games that won't work with Plus machines

because the keyboard locks off so that they will work with the Plus. Just send along the game on disk along with another disk or tape.

STS Software can be contacted at 298 Holton Road, Barry, South Wales, CF6 6HW.

Sorry, say Campursoft

Campursoft want to apologise to anyone who has sent off for the DIY ROMbox project. Owing to circumstances beyond their control (such as the good old UK postal system and the author vanishing abroad for a few months) they will not be able to send out the project for three months. But if you don't want to wait that long, contact the company on ☎ 041 554 4735 to cancel your order.

Apologies

We must apologise wholeheartedly to the American company SNK which now holds the copyright for *Ikari Warriors*. Regrettably, we put the game on our covertape last month without their permission. We regret that this happened and will make sure that something like it never happens again.

The greatest (computer) show in the galaxy

This Future Entertainment Show lark is shaping up to be a mammoth of an event, easily eclipsing the last two shows, with much more on offer for everyone who's into any sort of computing.

While there are still going to be loads of new games on show, games workshops and a game theatre, there's going to be a much bigger emphasis on the serious side of computing. Not business and stuff, but things like CD ROM, DTP, electronic music, digital art, that kind of thing.

And it'll be much more inter-

active, with loads of workshops, debates and demos which you can take part in. And, of course, all the latest technology and software will be vying for your attention.

Basically, if you're into any aspect of computing there's going to be something there for you not just to see, but to get involved in as well.

It all takes place from 26th-30th October at Earl's Court. Tickets cost £6 in advance and £7 on the door. The ticket hotline is ☎ 0369 4235 (and I haven't missed any numbers off that, honest).

The Future Entertainment Show
Earl's Court 2
26th-30th October 1994
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AA78: Covertape: Space Crusade, Sphinx, Sky, Skydive Rider, In the Land of the Rising Sun, Space Invaders, Dragon 3.

AA79: Covertape: Stryker and the Crypts of Trogan (demo), Anarchy, Croco Magneto, GPaint. Inside: The making of Seymour, buyers' guide to word processors. Reviews: Titus The Fox, Stryker.

AA80: Covertape: Stryker and the Crypts of Trogan (demo), Anarchy, Croco Magneto, GPaint. Inside: The making of Seymour, buyers' guide to word processors. Reviews: Titus The Fox, Stryker.

AA81: Covertape: Forbidden Planet, The Addams Family (demo), Sprite Designer. Inside: Fanzines, buyers' guide to DTP.

AA82: Covertape: Lemmings (demo), Dragonator, PowerBase. Inside: Making a sound effect, making a sound effect, making a sound effect.

AA83: Covertape: Lemmings (demo), Dragonator, PowerBase. Inside: Making a sound effect, making a sound effect, making a sound effect.

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AA85: Covertape: On The Run, Link, Worktop, Disk Organiser. Inside: Making music. Reviews: American Tag Team Wrestling, Soccer Pinball.

AA86: Covertape: Glider Rider, animation utilities. Inside: MIDI music. Reviews: Wild West Seymour, Reckless Rufus.

AA87: Covertape: Nexor, Pakman, MPack, Pilot (very simple programming language). Inside: Dizzy, this is your life. Reviews: Football Manager 3, Super Seymour.

AA88: Covertape: Tankbusters, Penguins, JL-Copy (tape to disk utility). Inside: Videomaster, top CPC add-ons. Reviews: The Shoe People, Crystal Kingdom Dizzy, Robin Hood.

AA89: Covertape: Wriggler, MagicDOS, Superchars. Inside: The European demo scene. Reviews: Zap'n'Balls, Crazy Cars 3 and a whole lot more (as they say).

AA90: Covertape: Steve Davis Snooker, LARA (Machine Code Utility). Inside: Making a sound effect, making a sound effect, making a sound effect.

AA91: Covertape: Taslward, Colossus Chess 4. Inside: How to get the most out of your word processor. Reviews: Making Music, Play Days, Fuzz Chess.

AA92: Covertape: BootTracker (music program), Syntax, Balloon Buster. Inside: Complete guide to data storage. Reviews: Soundtraxxer, The Simpsons.

AA93: Covertape: Racing Boxform, Mystical, Who's Afraid Of The Balrog? Inside: Spreadsheets and databases, setting up a PD library, Super Cauldron.

AA94: Covertape: Instant Recall (database), Contention. Inside: The CPC's hidden features, the CPC's hidden features.

AA95: Covertape: Instant Recall (database), Contention. Inside: The CPC's hidden features, the CPC's hidden features.

AA96: Covertape: Instant Recall (database), Contention. Inside: The CPC's hidden features, the CPC's hidden features.

AA97: Covertape: Rik The Roadie (okay, okay), Zzap Assembly. Inside: Making a sound effect, making a sound effect, making a sound effect.

AA98: Covertape: Rik The Roadie (okay, okay), Zzap Assembly. Inside: Making a sound effect, making a sound effect, making a sound effect.

AA99: Covertape: Rik The Roadie (okay, okay), Zzap Assembly. Inside: Making a sound effect, making a sound effect, making a sound effect.

AA100: Covertape: Elite. Inside: The Top 100 CPC products ever, a look back at the first 100 issues of AA. Reviews: Touchdown, Page Publisher.

AA101: Covertape: Exolon, Home Accounts. Inside: The complete guide to animation on the CPC, interview with Radical Software, Elite Masterclass.

AA102: Covertape: Cybernoid 2, Graph Master, D+Y+Y+X. Inside: make some noise - your CPC's sonic capabilities, The CPC world. Reviewed: DES - Desktop Environment System.

AA103: Covertape: Nebulus, Speech. Inside: copying devices, Fluff preview, Elmsoft interview, shoot-em-ups round-up, low-cost printer reviews.

AA104: Covertape: AA Toolkit, Uridium. Inside: Fluff review, the PD scene exposed, sports sim round-up, Basic Idea, Home Teacher and all the other usual stuff.

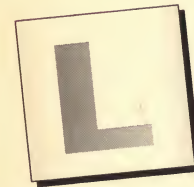
AA105: Covertape: Deliverance, Bomber, Basic Utilities. Inside: A complete guide to getting your CPC to communicate with other computers, Megablasters preview.

AA106: Covertape: Zynaps, Spriting Back. Inside: The easy way to animate your graphics, the complete beginners' guide to printers. Reviews: Making Music.

AA107: Covertape: Ikari Warriors, Picasso (art package). Inside: The weirdest and most pointless software and hardware ever released for the CPC. Review: Masters of Space.



Basically basic



Things change. It's a universal law. Nothing ever remains the same (except, perhaps, the plots on the Bill). And so, the Hairy one hands over the Basic tutorial to Rob Buckley and Angela Cooke...

This month, we're going to try our hand at one of the oldest, but most effective, tricks in the programmers back pocket, pPalette switching. This is a method of changing an area from one colour to another, extremely quickly. Try this:

10 INK 0, INT (RND*27)

20 FOR F=0 TO 500:NEXT F:GOTO 10

Line 10 tells the computer to select an INK from a random number available. Line 20 makes the act of line 10 stall for about a second, then GOTO it again. The amount of time can be changed by altering the 500 up or down.

When RUN, this program appears to be pasting a new colour on top of the old one. But what's actually happening? The monitor is

40 NEXT Y
50 PEN 3:LOCATE 11,12:PRINT CHR\$(22);CHR\$(1);
60 PRINT "...COLOUR CYCLING!..."
70 INK 0,6:INK 1,15:INK 2,24:CALL &BD19
80 INK 0,24:INK 1,6:INK 2,15:CALL &BD19
90 INK 0,15:INK 1,24:INK 2,6:CALL &BD19
100 GOTO 70

Line-by-line analysis:
Line 10

First, you set the screen MODE (see box out below). Next create a FOR loop, which has the variable Y (see AA104). This loop is done to allow us to plot on every line going up the screen.

Line 20
This line tells the computer to PLOT a point on the screen (there are more details on plotting in back AA102), at Y pixels up in INK colour A. MOD 3 makes sure that when variable A reaches the value 3, it returns to 0. In other words, the variable has a maximum number of 2. And so, the program

DRAWs a horizontal line, 640 pixels across the screen.

Line 30
This line tells the computer to increase the value of A by 0.3 each time. Try experimenting with the value of A to produce different sized lines. Go on, you know you want to.

MODE Muddle...

How many BASIC programmers does it take to change a light bulb? Syntax Error. Okay, so it was a bad joke (it sure was - Dave). But it does put across a point. The CPC has three different modes - 0, 1, and 2. Try typing in MODE plus one of these numbers, and see what happens.

- MODE 1 is standard. It can cope with up to four colours on screen at once.
- MODE 0 has chunkier pixels. It can have up to 16 colours on screen at once, but the resolution, frankly, is not much cop.
- MODE 2 is 80 column. This gives you great resolution, but can only cope with two colours. Ah well, that's the price you pay...

A PIXEL is one dot on the screen. Pixel resolution (how many dots the screen is made up of) basically defines how sharp your images are.

Line 40
This keeps doing the loop until Y=400.

Line 50
This sets up the print for line 60. PEN changes the writing colour. LOCATE positions the first character of the text. The CHR\$ bit, sets up Transparent Mode. With this line, the screen seems to be flashing BEHIND the writing. By taking this out, the screen flashes IN FRONT of the writing, making it look worse than it already does.

Line 60
Prints the defined text.

Lines 70, 80 and 90
These have a common aim. They decide the INK values. For example, INK 0 starts at 6, then 24, then 15 (or red, orange and yellow in plain English - Dave). CALL &BD19 is a programming method of slowing and regulating the program to give a steady display. Take this command out of these three lines, and see the muddled difference.

Line 100
This takes the program back to the beginning of the cycle (ie, 70).

Pretty good huh? This simple effect is used in hundreds of games. It can change a dull game, into a bright one.

Try changing line 20 to:
20 PLOT 0,Y,A:MOD 3:FOR G=1 TO 5:DRAW 64,64:DRAW 64,-64:NEXT G

This is a FOR LOOP. It is the G value that makes the zig-zag line.

EDIT line 10 so that you change the MODE number (to either 2 or 0), then run the program and see what it difference that makes. The colour changes, because of the amount of colours able to be displayed on screen at any one time (see box out).

Next Month

Next we will be looking at the SYMBOL command and altering character sets. Then, we will be pulling all these together into one large effect, known in polite circles as 'a game'.

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Old CPC network

- 1 Do you know if it's possible to network two 6128s?
 - 2 If it is, then how do you do it?
 - 3 What software will I need to do this?
 - 4 Can you share a printer (DMP 2000) between two 6128s? How?
 - 5 Is there a decent all-round music creator available for the 6128? I used to have one with drums, piano, guitar, etc.
 - 6 I need some more memory for one of my 6128s. I was thinking about getting the Datal Electronics 64k pack, and was wondering if I could use it on a 6128?
 - 7 Could I use a PC modem on my 6128?
 - 8 If so, could I communicate with a PC over the modem? Also could I gain access to Kixx or the Internet?
 - 9 What software will I need to do this?
 - 10 Can you put Superbasic (Type-Ins, AA51) on a covertape?
- Gareth Hughes, Guildford



- 1 No. Well, it's possible – way back in the distant past we printed a hardware project to link two CPCs – but there's nothing you can do with the finished connection except play *Power Tetris*.
- 2 See question 3.
- 3 See question 1 (this seems to be developing into some kind of loop).
- 4 Yes. Switch off both 6128s, connect the printer to the computer of your choice, and switch them on again. Alternatively, look through a PC magazine to find a nice, expensive Centronics printer-sharing box.
- 5 Have a look at *Reveal's Music Maker* (reviewed very favourably in AA106) or Robot PD's new *ChaRleyTraCker* (previewed this issue on page 34), an absolutely superb

Techie forum

The Romans might have had a forum. But they never had Richard Fairhurst to answer their techy queries. It's just as well they hadn't invented CPCs back then, really...

package which I've just finished writing (whoops, I think that was a bit of a giveaway).

6 Sorry, you can't. The 64k provided is fixed to act as the extra 64k which, with a 6128, you already have but which 464 owners don't. However, take a look through the Small Ads (page 24) to see if you can find a 256k memory expansion or silicon disc.

7 Yes.

8 You can communicate with any other computer using a modem (as long as the other computer is connected to a modem as well, of course). As for Kixx, that's US Gold's budget label. I think you what you really mean is CIX, which you can sign up with once you have the appropriate equipment – their modem number is 081 390 1255. A CIX account will give you affordable Internet access as well.

9 The comms software might come built into the serial interface that you buy, or you may need (or want) to order some public domain programs, such as the powerful and user-friendly *BBS Terminal*. Ask your favourite PD library about obtaining a copy.

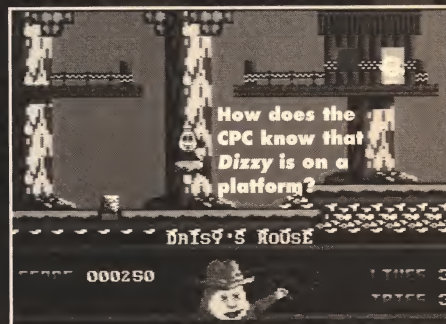
10 Certainly not. Type it in yourself, you lazy so-and-so. **Richard**



Private Eye

I am trying to learn machine code, so that I can write fast games, and I have a few questions.

- 1 Does the Firmware Guide (not the original Amsoft one, the other one) contain information about all the firmware calls, including entry and exit conditions? Where can I get it from, and how much is it? Do I need it for programming?
- 2 At the moment, I can confidently write platform games in BASIC, using machine code routines for things like sprites, but



they are too slow. I would like to do platform games in machine code, but I can't work out how to tell what the character what they can or cannot stand on. In BASIC I can use an array, but this wouldn't be possible in machine code, and a table of values would take up too much memory (I think).

Thomas Lovell, Eye



1 I think what you're referring to is the *Print-Out* publication, in which case yes, it does include all the necessary info. We don't know of any current suppliers, but contacting WACCI (see the Amscene Directory on page 32) would be a good move. The books, *The Ins and Outs of the Amstrad* (Melbourne House) and *The Amstrad Advanced User Guide* (Glentop) will also serve you admirably – check out the ever-useful Small Ads (page 24).

You don't need a firmware guide for programming – one of the best programmers I've met had never seen a copy – but it helps enormously, although more so for utility writers than game coders.

2 Why should a table of values take up any more memory than an array? An array is simply a table of values accessible from BASIC, after all. However, you do have a point about memory usage. Let's say that the screens are made up of sprite building blocks (platforms, trees, etc), and that each screen contains 30 sprites across in 15 rows – a table of 450 bytes. 50 screens of this size would take up 22k, not an ideal situation.

Instead, you're better off storing each screen as a series of 'instructions'. For example, place a platform 12 sprites long at position (5,3). This takes up a lot less room, but makes detecting whether the character is standing on the platform tricky. The best solution, in fact, is to use both methods. Store one table in memory, and when the player moves onto a new screen, blank the table. Then 'draw' on it by following the instructions about where to place the platforms.

Good luck with the game. **Richard**



A right ROM do
1 How easy is it to transfer BASIC programs to machine code and transfer them to EPROM (with a good working knowledge of BASIC)?

2 I have the opportunity to buy a reasonably priced 3.5-inch disc drive at a very keen price (us married people have to be economical). What is the maximum current available on the Plus 5 supply rail (pin 27) of the expansion socket? Could you elaborate on the pin connections for use with my 6128 to a standard 3.5-inch drive?

3 What's the best DOS for using with a second 3.5-inch drive if I were to use the DES package?

Jim Furie, Glasgow



1 'Transferring' BASIC programs to machine code means rewriting them, so you won't get anywhere without a good working knowledge of machine code too. However, the John Morrison EPROM



Band on the run

I have a problem. I have some music with loaders like this:

```
10 MEMORY &whatever
20 LOAD "filename.ext"
30 WHILE 1
40 CALL &BD19: CALL &whatever
50 WEND
```

These tunes will run if the computer isn't doing anything, but if you want to do anything the tune stops. Is there any way to change the programs so that the music will continue to play even when you are doing something else?

Tom Dean, Burslem



If you want to run the tunes from within a BASIC program, you could always use the *EVERY* command to call the routine every fiftieth of a second. Try something like this:

```
30 EVERY 1 GOSUB 8000
...rest of program...
8000 CALL &whatever
8010 RETURN
```

However, this takes up an awful lot of processor time. A far better way to do it is to



set up an interrupt from machine code to do the same thing. Give this a try:

```
10 IF PEEK(&AF00)=&21 THEN 80
20 FOR n=&AF00 TO &AF0B
30 READ a$: POKE n,VAL("&a$")
40 NEXT
50 DATA 21,20,AF,11,00,00
60 DATA 01,FF,80,C3,D7,BC
70 CALL &AF00
80 :
```

Change the last two numbers in line 50 to the address of the routine to call; for example, if it is &4003, make them read ,03,40. And there we go – interrupt-driven music. That wasn't too difficult, was it? **Richard**

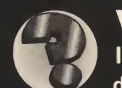
blower does come with an easy-to-use program to put BASIC programs on ROM, the maximum size being 16k. PD programs also exist to place your favourite machine code utilities on ROM.

2 I wouldn't advise powering the disc drive directly off the expansion socket, as messing around with ports connected directly to sensitive chips is never the safest of ideas. It is possible, though, to take a power feed out of the CPC's power connection to the monitor – my 3.5-inch disc drive is powered in this way. Or if you want to add a separate power supply, a 5v, 400mA one should do the job.

The connection between CPC and 3.5-inch drive is a simple pin-to-pin effort, although you might want to add a side switch to pin three.

3 DOS, DES... does it never end? DES is designed for ROMDOS compatibility, but *ParaDOS* does everything that *ROMDOS* does and much more besides, and co-exists quite happily with DES. It's probably your best bet.

By the way, bet your 'reasonably priced' disc drive isn't as much of a bargain as the next letter... **Richard**



Wow

I was recently able to pick up a dk'Tronics 256k silicon disc (fully working) for a fiver in a local computer shop. A bargain you say (too right... mine cost £40! – Richard) – I thought so, especially as I already have one that I bought some years ago that I have used successfully with both AMSDOS and CP/M. Using an article in AA46, I was able to perform a hardware modification to my

original silicon disc, enabling me to use it as either a 256k memory expansion or as a RAMdisc. 'Great,' I thought, 'all that extra space.' But my excitement was short lived.

I booted CP/M only to find that the system hanged after printing up the status line. There was no *^D* prompt and all I could do was reset the machine (a 6128). After a few experiments to see if I could identify the problem, I narrowed it down to the following: CP/M won't boot on my machine with a 256k RAM expansion fitted. Why does this happen, and can I do anything about it?

I also have an RS232 interface fitted to my 6128, the Amstrad/Pace version with the Commstar ROM fitted inside the box. When I plug the other silicon disc box in too (with its operating system ROM in it) so I can use it under AMSDOS, I do not get the sign on message from the silicon disc ROM, just the one from the Commstar ROM. I understand that this may be due to both of these ROMs trying to occupy the same slot. Out of interest, I opened up the RS232 interface box and noticed a spare area where a ROM could be fitted. Would my problem be solved if I took the silicon disc ROM out of its box, or would I be asking for disaster?

Nigel Shipp, King's Lynn



The silicon disc problem is a tricky one, but the most likely suggestion is that you have the model designed for the 464 and 664. This presumes the absence of the extra 64k of the 6128, and so

CPC Format

Back in AA105 The Hairy One said that you can actually fit 205k on a disc, using 10 sectors per track and 41 tracks. Can you print a formatting routine for this type of format?

Andrei Azzopardi, Malta

Here's an assembly language routine which'll do the job for you – type it into Maxam (or something similar), assemble it, run it with a blank disc in the drive and Bob's your uncle (whatever that means).

```
org &8000
ld de,&BE42: ld hl,xpb ;Set up XPB
ld bc,25: ldir
ld hl,command: call &BCD4 ;Initialisation
ld (addr),hl
ld a,c: ld (rom),a
ld d,0: ld e,0 ;D=first track, E=drive
ld hl,buffer: ld b,10 ;Main loop
;loop ld (hl),d: inc hl: inc hl ;Poke track into buffer
inc hl: inc hl: djnz iloop
ld hl,buffer
rst 3: dw addr ;Call disc ROM
inc d: ld a,d ;Loop until last track
```

```
cp 41: jr nz,loop
ret
.buffer db 0,0,&10,2,0,0,&15,2,0,0,&11,2,0,0,&16,2
db 0,0,&12,2,0,0,&17,2,0,0,&13,2,0,0,&18,2
db 0,0,&14,2,0,0,&19,2
.command db &86 ;CTRL-F, format track
.addr dw 0 ;Far address
.rom db 0
.xpb dw 40: db 3,7,0 ;XPB values for 205k
dw 204,63,&C0,16,0
db &10,10,32,50,&E5,2,4
db 0,0,&FF
```

You'll also need to poke the appropriate values into the XPB (eXtended Parameter Block) to tell the CPC how to read these discs. To do this, just copy the data above to the address stored at &BE42, as shown in the first few lines of the listing.

The listing above works with drive A. To use drive B, you'll need an *ld e,1* instead of an *ld e,0*, and you'll also need to add &40 to the value obtained from &BE42.

Alternatively, *ParaDOS* (available from *Better Than Life*, 298 Holton Road, Barry, South Glamorgan – or *Campursoft* on 041 554 4735) will read and write to this format automatically. And you may also be able to find Rob Scott's *Ultraform* utility – a past AA listing – floating around the public domain. The choice is yours – do you want to type out the answer, buy the answer or hunt for the answer to your question? **Richard**

does not attempt to map some of its extra memory over it. CP/M Plus is a remarkably fussy beast when it comes to hardware, and it's probable that it's taking exception to this. There have been a number of revisions of the dkTronics hardware, and with some units, it is possible to make an alteration – in the same vein as the A446 article – to convert a 464/664 unit into a 6128 one. The hardware junkies at BTL (298 Holton Road, Barry, South Glamorgan) have experience of altering these units... drop 'em a line.

The Amstrad/Pace serial interface is a strange beast. As you've noticed, there's an extra space for a ROM-slot inside. The interface also maps the existing ROM in twice, so it appears in slots 4 and 5 (being a 32k chip) and 12 and 13. One possibility is that putting an extra ROM in might take up the 12/13 slot. However, take a look at the legends on the PCB under the chips; they read '27128/256'. It looks more like an alternative arrangement in case Amstrad ran out of 27256s (32k ROMs) and needed to fit two 27128s instead.

Throw out the Commstar ROM – it's a useless pile of junk. There are far better programs in the public domain – and keep the Silicon Disc operating system where it is. **Richard**



3.5 inch good, 3 inch bad

Why do you need a 3-inch drive before a 3.5-inch drive? Is it a compatibility problem or a hardware problem? Could I use it to store self-made programs or Type-Ins if I didn't have the 3-inch drive first?

A bit of a moan about the machine code course: yes, it is nice to know about XOR, AND and OR etc, but could we have a bit of information about firmware routines please? This would be easier for people who have come from BASIC so that they can use the same principles in their machine code programs that they used in BASIC, because the firmware routines are what BASIC uses.

Matthew Bland, Bury St Edmunds



You don't need a 3-inch drive first, as such, but you need some form of disc controller circuitry. This is only available in the 664, 6128 and 6128 Plus, and the DDI-1 interface box, all of which come with a 3-inch drive as standard. If you can

get hold of a disc interface with a 3.5-inch drive – for example, Siren's clone – this will work just as well, and you can store your own programs on it (though not a lot of CPC software is ever officially released on 3.5-inch disc).

Yes, BASIC does use the firmware routines, but it uses a lot else as well. It's not just 'nice' to know about XOR, AND and OR, it's ruddy essential – they are the nuts and bolts of machine code programming. You'd feel a bit annoyed if a BASIC tutorial went straight into the EVERY command (a firmware operation, believe it or not) without explaining the IF command first... **Richard**

AA

Techy troubles?

If your printer's not perfect, your word-processor not wonderful, or your keyboard not compliant (er...), Techy Forum is here to sort you out. Write to Techy Forum, Amstrad Action, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW. Oh, and don't forget to enclose a note begging for Simon's classic Boo! the Ghost Construction Kit to make a long-awaited covertape appearance.

Top Tips

Abstract designs

MODE: MERGE SCREEN: TEXT ☐ **PAP OPEN**
Screen Designer: somebody should have designed a better file format.



With reference to David Cash's problem in loading Screen Designer screens (AA104), the loader given does not work. The screens are saved as headerless files with a sync character of 255 and a machine code loader program in front of them; it is the loader program that causes

the trouble, as it just loops

after the screen is loaded and does not return to BASIC.

Having encountered this problem myself when I got AA96, I hacked into the loader program and found the sync character. I've written the following 12-byte program, which should be at the start of any BASIC program you want to load the screen into:

```
10 REM *****
20 FOR i=374 TO 385
30 READ a$: POKE i,VAL("&"a$)
40 NEXT
50 DATA 3E,FF,21,00,C0,11,00,40,CD,A1,BC,C9
```

When you want to load a screen, run the above program, then type CALL 374, and position the tape at the start of the headerless file (skipping past the loader); the screen will load, and when it's finished, will return to BASIC or the rest of the program.

When you've run the program once, lines 20-60 can be deleted, but you must leave line 10.

Tony Newell, Keighley

Did you ever own a Sinclair ZX81? (I did – a shamed Dave.) I seem to remember that poking machine code into REM statements was de rigeur

on that prehistoric machine. Anyway, many thanks for a short but very sweet listing. All I can say is, what a ridiculous file format! **Richard**

Happy hackers

In AA106, Robert Stewart asked why Academy wouldn't run on his Plus. Since then, Better Than Life (298 Holton Road, Barry, South Glamorgan, Wales) have contacted us to say that they will happily hack any non-multiloader game with similar problems so that Plus owners can play it, free of charge. Just send along the game tape and a disc for the new version to be run from. Can't be bad.

Be there or be square

Now this is what I call a techy routine. Forget your wimpy BASIC programs and machine code "Hello World!" routines, this subroutine will square the number in HL and return the result in the 32-bit pseudo-register DEHL. It's pretty fast, too.

```
.sq_hl      ld a,16                ;A =number of bits
            ld bc,0: ld d,h: ld e,1 ;BCDE =to add each time
            ld (store),bc: ld (store+2),bc ;store=current total
.sq_loop    rr h: rr l: jr nc,nosqa
            push hl
            ld hl,(store+0): add hl,de
            ld (store+0),hl: ld hl,(store+2)
            jr nc,jaddbc: inc hl
.jaddbc     add hl,bc: ld (store+2),hl
            pop hl
.nosqa      or a: rl e: rl d: rl c: rl b ;BCDE=BCDE*2
            dec a: jr nz,sq_loop        ;loop 16 times
            ld de,(store+2): ld hl,(store)
            ret
.store      ds 4
```

Array Carpenter

For the wimpy BASIC programmers (read: well-adjusted members of the community who don't know a DAA from an RLD and don't particularly want to), have you ever considered speeding up your programs using arrays? For example, if you're drawing a lot of circles, try reading the SIN and COS values into two arrays of 360 elements each at the start of the program. It takes up a bit of memory, but it saves the computer having to bother with slow trigonometry calculations every time you want to draw a circle.

AMIGA MAGS

Issue 63 of *Amiga Format* has an amazing feature on interactive TV and how the Commodore Amiga will be playing a major role in this new entertainment revolution. We've also got some excellent Coverdisks with *Octamed*, a top music package, and an awesome demo of Impressions' *Detroit* game (where you try to outdo Henry Ford at designing and flogging motors to the world). *AF63*: it's the dog's... **£3.95, WITH 2 COVERDISKS**

Amiga Power tells you everything you need to know about playing games on the Amiga (the C64 and CPC's natural heir). For example, the September issue's got an exclusive review of *Super Stardust*, probably the best Amiga shoot-'em-up yet. It also comes with two disks, stuffed full of demos and complete games. *Amiga Power* truly is the mightiest computer games magazine ever devised by human beings. **£3.95, WITH 2 COVERDISKS**

AMIGA SHOPPER

Amiga Shopper is the definitive guide for every serious Amiga user. In our September issue, we will be taking a long hard look at the ray-tracing program *Imagine 3*, plus we test every 24-bit graphics card we can get our hands on. **£2.50**

CONSOLE MAGS



It's the biggest-selling and bulgiest multi-format games magazine this side of reality (and probably beyond). *Stargate* is going to be one of the hit movies of the year, and it's also set to burn up your consoles in an extravaganza of marines-in-time-travelling-back-to-Egypt-and-getting-trapped-in-a-pyramid, er, action. And only GamesMaster has the EXCLUSIVE first look in the September issue. Get it or paint yourself purple and sing Kung Fu Fighting. **£2.25**



The September issue of *Sega Power* features an exclusive review of gorgeously gory Mega Drive *Doom* clone, *Zero Tolerance*; a massive round-up of all the games planned for Mega Drive 32; a dip into Sega's fantastic new coin-op, *Virtua Star Wars*; and a REVIEW of Mega Drive *Mortal Kombat 2*. It's out now and, unless you're some kind of laughably unsophisticated peasant with a funny accent, you'll buy it... **£2.50**



It's the total Nintendo experience with all the latest goss on all things NES, SNES and GameBoy. And here's a sneak preview of what September's issue's got in store: *Mortal Kombat 2*, *Super Battle Tank 2*, *Eek the Cat* and loads of other stuff that's just as pot-noodlingly good. **£2.50**



The magazine for anyone who's seriously into their SNES (or who like pictures of women with tiny pointy chins and huge eyes). The September issue contains the definitive review and first guide of *Super Street Fighter 2*. There's also a massive *Super Metroid* solution as well as all the Super Nintendo news from Japan and America. It's well chocka! **£3.95**

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PC MAGS

PC GAMER

In the September issue of *PC Gamer*, find out whether *Rise Of The Robots* lives up to its hype in our exclusive location report. Also we've got the first review of Microsoft's epic *Space Simulator*, players guides to *TIE Fighter* and *Ultima VIII*, the biggest PC games news section in the known world and opinions from the most respected writers in the games industry. And Gary Penn. **£3.95 WITH 2 COVERDISKS**

PC Answers

The mag that helps you get the most out of your PC. In the latest issue we'll tell you all about: Creating your own multimedia programs – it's exciting and so easy anyone can do it • Choosing and using scanners • How to manage your files to make using your PC more efficient. And, as usual, *PC Answers* is packed-to-the-gills with reviews, hints and tips and probing news investigations. **£3.95 WITH COVERDISK**

PC FORMAT

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- Artificial Intelligence and how it's all around us right now.
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RoutePlanner



How do you get there from here? If you're planning on driving then here's a program which might just have the answer. Dave Golder puts on his flat cap and driving gloves to take RoutePlanner out for a spin...

The shortest distance between two points is a straight line. Fair enough. But, as always, theory and reality are poles apart. If you want to drive from Greta to Glastonbury in a straight line you'd need something like an amphibious tank armed with enough missiles to demolish a few thousand buildings and a thick enough skin to withstand the ire of hundreds of farmers all going red in the face and shrieking, "Ger orff moi lahdn."

Nope, the reality is, if you want to get from A to B in Britain, you normally have to travel along a route that takes you on a tour around the rest of the alphabet. The British road system makes about as much logic as a tax returns form. So any help you can get to find out how to the best

way to get from where you are to where you want to be is much appreciated.

Step forward *RoutePlanner*. The CPC's answer to *Autoroute* is the pet project of AA's very own techy supremo Richard Fairhurst. The purpose of the program is to help you plan a road route from one town to another anywhere in the UK, taking into account such things as traffic jam trouble spots, the speed of your car and the fact that motorways can (in theory, but we all know what that means) be faster to travel along.

It sounds like a mammoth coding task. In fact it was a mammoth coding task. And the results demonstrate the enormous effort that has been put into the program. But we've all seen 'worthy' coding exercises

before - software that has obviously taken ages to write but which ends up about as exciting and useful as a model of Dungeness nuclear power station built out of matchsticks.

So, does *RoutePlanner* actually work? Does it serve a worthwhile purpose? Can you use it without a degree in higher mathematics? Or is just a impressive curiosity that'll run out of novelty value the 900th time you have to click on a button the size of a pixel?

To be honest, *RoutePlanner* is not perfect, and there a number of irritation, but overall, it's a pretty darned impressive piece of work. It does everything you could want it to. A bit slowly perhaps, but it gets there.

You start off on the main map, From there you zoom in and choose your starting point. Next you have to tell the program where you want to go. Then you can indicate whether there are any places you want to avoid (for whatever reason) and even suggest a preferred travelling speed (whether determined by the state of your car or the fact that

Auntie Maud's going to be in the back, and you know what she's like).

Then the program works out the optimum route and tells you how many miles the journey will be, how long it (should) take, which roads to use, and how far you need to travel along them, and which towns and cities you should pass through on the way. This 'itinerary' can be printed out so that you can refer to it when you're on the road (presumably you won't be able to plug in your CPC in the car). All this takes on average about a minute.

The list of towns and roads included is impressively large. If you live in some village in the middle of Dartmoor you're going to be disappointed but there's bound to be a town in the program that's near enough to make the program useful to you.

It's extremely simple to use, and offers loads of keyboard short-cuts to make life easier - you can zoom in and out, or centre the map using the CONTROL and COPY keys. The one thing missing from the version we reviewed was the option to locate towns by typing in the names; Richard promises this feature will be included in the released version, and it should make using the program a hell of a lot less fiddly (if you use the demo, you'll know how hit and miss it can be trying to latch the town you want).

But as I said, it's not perfect. The maps are not particularly clear and some of the place names are unreadable. And it'd make a life a lot simpler if you could scroll around the map instead of having to zoom in and out all the time. And that cursor - has it got inertia on it, or something? Is it supposed to add a bit of a gaming challenge? Personally, I reckon the program should allow for joystick control.

And it is slow. The problem is, it probably couldn't go any faster - the lack of speed is down to the CPC's limitations (go on, admit it, it does have limitations). So as you watch the maps appear on screen like ice forming on a window, you have to just grin and bear it, and be thankful that someone's at least gone to the bother of trying to get a program like this to work on the CPC.

Don't let this put you off, though. *RoutePlanner* is a mightily ambitious piece of software that just about comes off. Sure, the most impressive thing about it is that it's even been done, and it undeniably will attract a great deal of interest just because of the novelty factor, but the bottom line is, IT WORKS. It might be a touch creaky, but it produces the goods. **Dave**

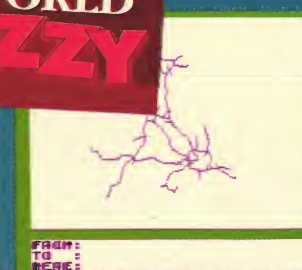
Statistix

Name: *RoutePlanner*
Author: Richard Fairhurst
Price: £19.99
Format: 128k only
Supplier: Sentinel Software, 41 Enmore Gardens, East Sheen, London, SW14 8RF ☎ 081 876 70332

Rating: 88%

Get on the right track

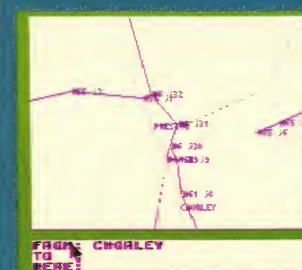
Ever wondered how to get from Chorley to Canterbury? Probably not. But here's how you'd find out using our covetage demo, just in case...



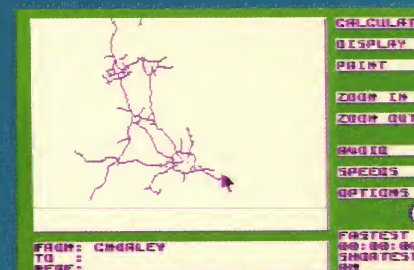
1 This is the main map that you'll see when you first load up the demo. Position the cursor (using the cursor keys) over area which contains the town from which you want to start.



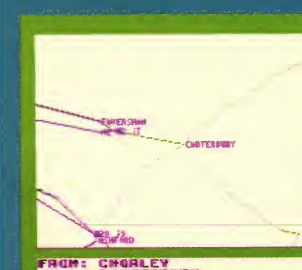
2 Press COPY. Now zoom in either by moving the cursor to the ZOOM IN button or using CONTROL I. There are five levels of magnification. This is the third - you can see the increased detail.



3 When you can see it, move the cursor over your starting town and press COPY. The name of the town will appear next to HERE. Move the cursor up to FROM and press COPY again.



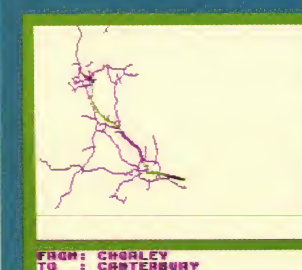
4 The name of the town will now appear next to FROM. Now you need to select your destination. ZOOM OUT (either by using the button provided or pressing CONTROL and O on your keyboard).



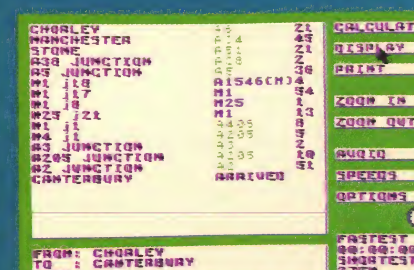
5 Select your destination using the same method as before. When the name appears next to HERE, move the cursor up to TO and press COPY. The destination will now appear next to TO.



6 Click on CALCULATE (using the COPY key, remember). The clock in the bottom right will now indicate that the computer is thinking about the route. This will take about a minute or so.



7 When the computer has finished calculating (you can also use CONTROL C), the route will be shown on the map as a bold line. You can move about the map in the same way as before.



8 Click on DISPLAY to reveal a table describing details of the route. The box at the bottom right also tells you the overall distance of the journey. CONTROL and D will also toggle the display.

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PRINTERS

With CPC or Plus cable.
CITIZEN 120 £140
Excellent Budget 9-PIN printer with NLQ mode.
CITIZEN ABC £175
High performance 24-PIN printer with sheet feeder. PLEASE ADD DELIVERY CHARGE - DRIVES £5, PRINTERS £10.

Even at this distance the M25 is depressingly familiar.

As you zoom in more roads start to appear. And you can see traffic building up on the M1.

Now it's beginning to look like the opening credits to EastEnders.

And now, like crop circles, the town names begin to take shape.

But how the heck are you supposed to read all this lot? It's like trying to find a Piddler in The Marsh...

so why do I need a Multiface?

Fancy adding a few extra boxes to the back of your CPC? Not sure what a lot of them do? Never fear, Richard Wildey is here with the first part of a new series which each month will take a specific piece of hardware and tell you why you never knew you couldn't live without it.



The Multiface is probably the most popular CPC add-on available, but what do you do with yours? Are you using it to its full potential? You probably bought your Multiface with the intention to back-up games, but beyond that single red and yellow line of commands lies a multitude of possibilities.

Saving positions

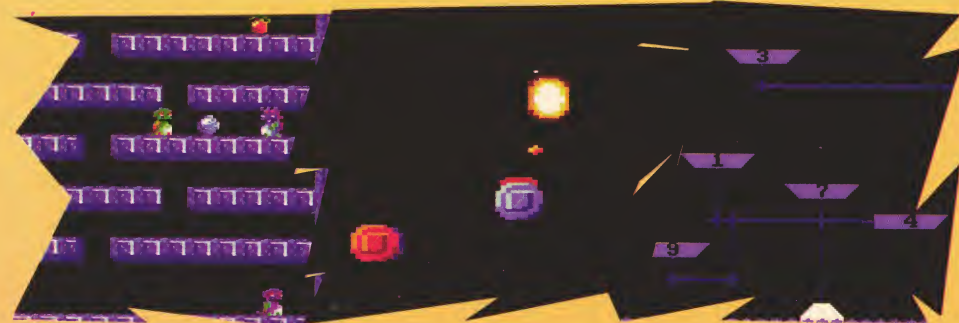
As well as saving your games to disc you can also use it to save your position in a game. Save it just before the end-of-level guardian blasts you to kingdom come, then should the inevitable happen give him another go later.

Listing one

```
10 ' LISTING 1. MULTIFACE screen load and
saver
20 MEMORY &3FFF
30 MODE 2:CAT:INPUT "Enter filename (Without
extension)";f$
40 LOAD f$,&4000
50 CALL &8000
60 SAVE f$+"SCR",b,&C000,&4000
```

POKES

If that doesn't make your games easier then the infamous POKES will. Using your black box you can by-pass all protection a game has and POKE values directly into the CPC's memory, such as the number of lives you wish to have. Back in issue 90 we printed the most comprehensive list of Multiface pokes you will ever find - make use of it. There is also a large database of Multiface pokes floating around the PD libraries if you feel a thirst for any more.



If it wasn't for the Multiface AA would have a hell of a time getting screen grabs...

If you haven't got a multiface, you don't know what you're missing.

It's possible to find your own game POKES though this requires some machine code knowledge. The J W Brown disc utility, a PD disc, has been written to make your life easier. It searches Multifaced games for variants of the way in which a programmer can make the number of lives decrease in a game.

Doing it yourself

If you know what you're looking for and are doing the searching yourself you can either load the unprotected, saved game into memory or use the Multiface, in conjunction with Romantic Robot's own *Insider* or the excellent *Tearaway* from CPC Network, to freeze the game during play and search the memory. Both *Insider* and *Tearaway* give you many other functions including the ability to view memory and most importantly disassemble code. Once you have made your desired changes you can return to the game.

Both of these programs work by storing themselves in the 8K RAM inside a Multiface, in the *Insider*'s case it stores a small routine to load the rest of the program from disc, *Tearaway* also uses the extra banks of a 128K machine to store the main code. Where both of these programs fall down is their inability to save sections of code to disc; for that you'll need *HackIt*.

Only two other programs have made use of this method of by-passing the protection of a program; these are *Soundhacker Pro* by STS, which is designed to hunt out and save tunes

created with *Soundtraker*, a much-used utility by the demo-writing fraternity; and the other is *The Ultimate Sprite Searcher* which allows you to stop a game and hack the sprites from it.

Saving graphics

The Multiface alone provides the useful feature of being able to save graphics, in the form of screens. The format in which they are saved, saves not only the screen but also the inks and the CRTG settings (the screen size).

This, though all well and good for viewing the screen alone, is compatible with very few art packages. **Listing one** is just a simple program with will load in a standard sized Multifaced screen at &4000; CALL it to display and save it out as a standard screen, compatible with most if not all art packages and other such programs.

This program will only cope with standard-sized screens. Some games use the a Spectrum-sized screen. The Amstrad screen can

Listing two

```
10 CLEAR:DEFINT a-z:MODE 2
20 PRINT CHR$(24)+" Multiface Spectrum to
Amstrad screen size
converter .By R.Wildey 1994. "+CHR$(24)
30 CAT:INPUT "Enter Screen filename (Without
extension) ";f$
40 MEMORY &3FFF:LOAD f$,&4000
50 IF PEEK(&8079)<32 THEN PRINT "This is
not a Spectrum screen."
60 MODE PEEK(&8088) AND 3
70 FOR a=a TO a+63:POKE &C000+c+a+s,PEEK
(&4000+a+c):NEXT
80 s=s+16
90 IF a<1575 THEN GOTO 70
100 c=c+&800:IF c=&4000 THEN IERA,f$+"b
in":SAVE f$+"scr",b,&C000,&4000:END
110 a=0:s=0:GOTO 70
```

display 80 characters on one line (in MODE 2) whereas the Spectrum can only display the equivalent of 64 characters, giving you a much thinner screen. **Listing two** converts these annoyingly-sized screen to the standard format.

If you've executed a Multifaced screen (CALL &8000), discovered it was a Spectrum-sized one and want to return to the CPC size (no doubt you will, in case the CPC starts to perform other spectrumesque functions such as somebody sneezing next door causing the power pack to wobble and the entire machine to crash) then enter:

```
OUT &BC00,1: OUT &BD00,&28: OUT &BC00,2:
OUT &BD00,&2E: OUT &BC00,6:OUT &BD00,&19
```

And you should now be restored to full normality (unless you're Dave, of course, in which case concepts of normality don't really apply)

Available from... The best place to get a Multiface from is: Romantic Robot, 54 Deanscroft Avenue, London NW9 8EN ☎ 081 200 8870.

Assembly time

New Assembly Line supremo Rob Buckley jumps straight in at the deep end and

looks at a rather snazzy effect which will jazz up those dull programs.

Let's get straight into action, since we've something large to fit into a very tight space (ooh er!). Yes this month we're looking at a compact(ish) routine I call *Graphics Scaler*. Put simply, this is a piece of code which will take a normal area of graphics data such as a sprite, and then display at any size from one byte wide and one byte high to 80 bytes wide and 200 high.

The first part of this code is a grab routine (REF 1); it grabs an area of screen and stores it in memory. This is pretty standard so I won't go into details. Here's how to call it:

CALL &A000,(address),x (0-79),y (0-199),width in bytes,pixels high

When trying to scale something you need to know the size of the original and proposed areas.

If the original is 20 pixels high and you want to produce one 10 pixels high you would skip each alternate line. That is:

$\frac{\text{Original}}{\text{Proposed}} = \text{Number to skip}$

Here's the algorithm of how this is achieved.

- 1 A = Proposed
- 2 A = A - Original
- 3 If A is negative Jump to 6
- 4 Redraw line
- 5 Jump to 2
- 6 A = A + Proposed
- 7 If A is negative then Skip a line & Jump to 6
- 8 Get Line from original
- 9 Jump to 4

This can be seen at REF 3 in the listing.

Horizontally, however, there's more than one pixel to a byte, unlike in the vertical routine above. You can get around this by taking each byte and storing it as individual pixels, eg, each byte results in two bytes, one for each pixel in MODE 0. This is then converted into a similar pixel-by-pixel group of bytes using the previous algorithm, which is then joined back into a single byte to be pasted back on the screen.

To use this routine:

CALL &A038,Addr of data,Width of data,Height of data,X (0-80),Y (0-199),New width,New Height

Hang on, I hear you cry, what's all this code (REF 2) at the start of the routine? Well, this is what makes it so quick. When calculating horizontally the same algorithm will be repeated for each line, eg, the fourth pixel may become the ninth pixel, but this will be the same on lines 1, 2, 3 and 20. So, therefore, the quickest method is to have a routine dedicated to producing the desired effect. This is called self-modifying code, and is generated at the start of the routine producing a piece of code specially designed to do the calculation for horizontal pixels automatically rather than referring to the scaling algorithm each pixel. This routine appears on running at location DATAPUT, so why not disassemble it and take a look? Go on, you know you want to.

NEXT MONTH

This routine should give you all lots of fun zooming in and out of the screen. When we return next month we are going to look at screen compacting; that is squeezing a standard screen, or any graphics, into a smaller amount of memory. Also if you have any queries on Assembly or Machine code why not just drop us a line at the usual address - Amstrad Action, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

Graphics Scaler

```
*** REF 1
ORG &A000
LD B,A
LD HL,DataPut
LD A,C
SUB B
JP NC,HCalc10
LD A,B
LD (Num1),A
LD (Mrk1+1),A
LD A,0
HCalc1: LD (HL),&ED
INC HL
LD (HL),&A0
INC HL
SUB C
JP NC,HCalc2
ADD 0
JP HCalc3
HCalc2: LD (HL),&2B
INC HL
HCalc3: LD (Tmp1),A
LD A,(Num1)
DEC A
JP Z,Next
LD (Num1),A
LD A,(Tmp1)
JP HCalc1
HCalc10: LD A,B
LD (Num1),A
LD A,C
LD (Mrk2+1),A
LD A,0
Mrk2: ADD 0
MloopPop: POP AF

MainLoop: SUB C
JP C,IfNeg
PUSH BC
PUSH AF
CALL PutScr
LD A,(Cnt)
DEC A
LD (Cnt),A
JP NZ,MloopPop
POP AF
POP BC
RET

Main: LD HL,(Tmp2)
LD E,(IX+10)
LD D,0
ADD HL,DE
LD (Tmp2),HL
LD A,(DE)
INC DE
LD A,(DE)
OR C
LD (HL),A
INC DE
INC HL
DUNZ Ploop1
LD HL,(Tmp1)
CALL &BC26
LD (Tmp1),HL
RET

IfNeg: ADD B
JP M,SkipLine
PUSH BC
PUSH AF
CALL GrabScr
CALL Convert
JP Main
GrabScr: LD B,(IX+10)
LD HL,Data1
LD DE,(Tmp2)
LD A,(DE)
AND %10101010
RRA
LD (HL),A
INC HL
LD A,(DE)
INC HL
LD A,(DE)
DataPut: DS 400

Convert: LD HL,Data1
LD DE,Data2
CALL DataPut
RET

Ploop1: RLA
LD A,(DE)
LD C,A
INC DE
LD A,(DE)
OR C
LD (HL),A
INC DE
INC HL
DUNZ Ploop1
LD HL,(Tmp1)
CALL &BC26
LD (Tmp1),HL
RET

Tmp1: DS 2
Tmp2: DS 2
Num1: DS 1
Cnt: DS 1
Data1: DS 160
Data2: DS 160
DataPut: DS 400
```


Type-ins

Fancy a bit of DIY? Here are a couple of listings which should keep you going for a while. And if you've already done it yourself, you could be onto a nice little earner, as guest Type-Ins host Keith Woods explains...

This month Chris Morgan steals all the glory with a nifty animation program and a crazy racer. Glory's not all he gets, however. He also walks away with a crisp new tenner (or he will if we can read his address on the letter!). Green with jealousy? Don't be. You too can get your hands on some of the cash. It's really simple, honest it is! Just read the box below...

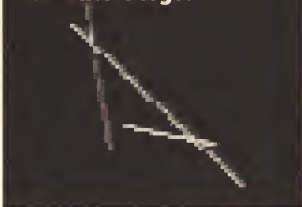
ANIMATOR

LAnimator is a rather nifty little program, for, erm... doing line animation (well there's a surprise). It uses an 'in-betweening' technique to metamorphose one drawing into another, with the possibility of using a number of different pictures in a sequence.

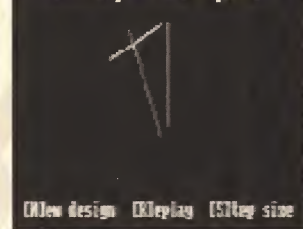
Animator features a handy little menu which makes it all very easy to use. One thing you need to know, though, is that each frame must use the same number of lines so the computer will not allow more lines on subsequent frames. Oh yeah, and it's a bit slow, but being Basic you'd guessed that anyway hadn't you?

Filename: ANIMATOR
EAM 10-REM-Animator

An early test for the Channel 4 logo.



Ultimately it was rejected.



GAOP 20-REM-by Chris Morgan
DACB 30-REM-(c)1994
BAIG 40-REM
DANG 50-DEFINT-a-z
IAAE 60-SYMBOL-255,120,240,240,248,156,14,7,3
EAPC 70-MODE-2-GOTO-590
OAAF 80-INPUT-No. of frames; fr:IF-fr(2-OR-fr
>15-THEN-80
IBPB 90-DIM-x1(fr,40),x2(fr,40),y1(fr,40),y2(fr,40),xs1(fr,40),xs2(fr,40),ys1(fr,40),ys2(fr,40)
CAII 100-pic=-1
FAFI 110-IF-y>398-THEN-y=398
FABE 120-MODE-2:lx=0:ly=0
DAAI 130-x=320:y=200
DANK 140-x1=x:y1=y
GADB 150-PRINT-CHR\$(23);CHR\$(1);
BADJ 160-TAG
HAEE 170-PLOT-x,y:PRINT-CHR\$(255);
EAAE 180-xx=x:yy=y
GAFE 190-y=y+INKEY(0)-INKEY(2)

GACE 200-x=x+INKEY(1)-INKEY(8)
CBIL 210-IF-INKEY(47)=0-AND-ABS(pic)=1-AND-pi
c=-1-AND-n(1)>1-THEN-pic=-2-GOTO-120
IBDL 220-IF-INKEY(18)=0-AND-n(ABS(pic))<50-AN
D(lx)>x-OR-ly>y-THEN-lx=x:ly=y-pic=-pic
GOTO-310
EAMJ 230-IF-x<0-THEN-x=0
FABI 240-IF-x>638-THEN-x=638
FAKI 250-IF-y>398-THEN-y=398
EABK 260-IF-y<0-THEN-y=0
HABN 270-IF-xx=x-AND-yy=y-THEN-190
CBMI 280-MOVE-xx,yy:PRINT-CHR\$(255);:MOVE-x,y
:PRINT-CHR\$(255);:MOVE-xx,yy
MABC 290-IF-pic<0-THEN-DRAW-x1,y1:DRAW-x,y:GO
TO-180
JACA 300-PLOT-xx,yy:PLOT-x,y:GOTO-180
EBDP 310-IF-pic<0-THEN-x1=x:y1=y:xl(pic,n(pic
>1)=x:y1(pic,n(pic)+1)=y:GOTO-190
FAOJ 320-n(pic)=n(pic)+1
LAEM 330-x=xx:y=yy:TAGOFF:PRINT-CHR\$(23);CHR\$(
0);
KABD 340-DRAW-x1,y1:PRINT-CHR\$(23);CHR\$(1);:T
AG
DAMC 350-MOVE-x,y
LAPM 360-x2(-pic,n(-pic))=x:y2(-pic,n(-pic))=
y
OAAM 370-IF-pic=fr-AND-n(fr)=n(1)-THEN-n=n(1)
:TAGOFF:GOTO-400
OAOG 380-IF-n(pic)=n(1)-AND-pic<1-THEN-pic=
pic-1:GOTO-120
CAPK 390-GOTO-190
GAHB 400-WHILE-INKEY<" ">:WEND
LALP 410-INPUT-No. of steps;st:IF-st<1-THEN-4
10
HAEM 420-MODE-2:PRINT-CHR\$(23);CHR\$(1);
EAIK 430-FOR-c=1-TO-fr-1
ABOC 440-x1(c,0)=x1(c,1):x2(c,0)=x2(c,1):y1(c
,0)=y1(c,1):y2(c,0)=y2(c,1)
DAAO 450-FOR-a=1-TO-n
BBFP 460-xs1(c,a)=(x1(c+1,a)-x1(c,a))/st:xs2
!(c,a)=(x2(c+1,a)-x2(c,a))/st
BBMP 470-ys1(c,a)=(y1(c+1,a)-y1(c,a))/st:ys2
!(c,a)=(y2(c+1,a)-y2(c,a))/st
DAEH 480-NEXT-NEXT
DAEO 490-FOR-a=1-TO-n
MAJE 500-MOVE-x1(1,a),y1(1,a):DRAW-x2(1,a),y2
(1,a):NEXT

EANK 510-FOR-c=1-TO-fr-1
EAIK 520-FOR-b=1-TO-st
DAPN 530-FOR-a=1-TO-n
OAMH 540-MOVE-x1(c,a)+(xs1(c,a)*(b-1)),y1(c,
a)+(ys1(c,a)*(b-1))
OAIH 550-DRAW-x2(c,a)+(xs2(c,a)*(b-1)),y2(c,
a)+(ys2(c,a)*(b-1))
NAAC 560-MOVE-x1(c,a)+(xs1(c,a)*b),y1(c,a)+(ys1(c,a)*b)
NAMB 570-DRAW-x2(c,a)+(xs2(c,a)*b),y2(c,a)+(ys2(c,a)*b)
EAOO 580-NEXT-NEXT-NEXT
IBFK 590-LOCATE-1,24:PRINT"IDisc.(save) [L]
oad. [N]ew design. [R]eplay. [S]tep size
IABP 600-a\$=UPPER\$(INKEY\$);IF-a\$=""-THEN-600
PALO 610-IF-n=0-AND-a\$="D"OR-a\$="R"OR-a\$="S")
THEN-PRINT-CHR\$(7);GOTO-600
MAPA 620-IF-a\$="R"AND-st=0-THEN-PRINT-CHR\$(7)
;GOTO-600
LAFL 630-ON-INST("DLNRS",a\$)GOTO-600,660,72
0,650,420,410
CAJK 640-GOTO-600
EAMB 650-CLEAR:GOTO-80

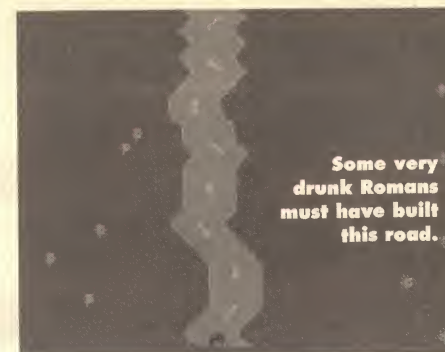
For those of you viewing in black and white, the road is pink (I'd change that if I were you).

IAGO 660-INPUT-Save.:Filename:.,f\$
DABJ 670-OPENOUT-f\$
EAFE 680-PRINT#9,fr,n
HACL 690-FOR-a=1-TO-fr:FOR-b=1-TO-n
KAIP 700-PRINT#9,x1(a,b),x2(a,b),y1(a,b),y2(a,b)
IABE 710-NEXT-NEXT-CLOSEOUT:GOTO-600
KAJH 720-CLEAR:INPUT-Load.:Filename:.,f\$
GABP 730-OPENIN-f\$:INPUT#9,fr,n
IBBF 740-DIM-x1(fr,40),x2(fr,40),y1(fr,40),y2(fr,40),xs1(fr,40),xs2(fr,40),ys1(fr,40),ys2(fr,40)
HAPK 750-FOR-a=1-TO-fr:FOR-b=1-TO-n
LABA 760-INPUT#9,x1(a,b),x2(a,b),y1(a,b),y2(a,b)
HAGO 770-NEXT-NEXT-CLOSEIN:GOTO-600

CAR RALLY

LFortunately Chris Morgan's programming is better than his spelling (there's no 'e' in Rally mate), so when he saw Simon's efforts at programming a racing game in AA106's Basically Basic, which he assures us he doesn't usually read (yeah, yeah... thousands wouldn't, but we believe you), he just had to write a better version (to be fair, Simon's program was only supposed to be an example of particular Basic routines).

The result is a racing game with a simple objective - whatever you do, stay on the road! Unfortunately, this is complicated somewhat by the



fact that there are no brakes - aaarrgghh! Since the road never ends this is more of an endurance test than anything else. Happy motoring!

FAEC 10-REM-Car Rally
GAOP 20-REM-by Chris Morgan
DACD 30-REM-(c)1994
BAIG 40-REM
NAOA 50-PRINT-Press any key to start:CALL-&B
B18
BAMP 60-MODE-1
HAGP 70-SYMBOL-254,16,84,56,146,84,56,16,16
JABF 80-SYMBOL-255,126,133,255,255,195,255,16
1,129
KADK 90-INK-0,19:INK-1,13:INK-2,26:INK-3,6:BO
RDER-19
NAFJ 100-WINDOW-18,21,1,25:PAPER-1:CLS:PAPER-
0:WINDOW-1,40,1,25
GAAA 110-FOR-n=400-TO-0-STEP-48
HAEO 120-PLOT-304,n,2:DRAW-0,-16:NEXT
DAWJ 130-DEFINT-b-z
EACN 140-minx=18:cx=18
FADL 150-a=(RND*3)+1:a=FIX(a)
MAPJ 160-IF-a=1-AND-minx<6-OR-a=3-AND-minx>32
-THEN-150
CANC 170-n=n+1
HAJL 180-IF-a=1-THEN-minx=minx-1
HBPA 190-1=3:IF-a=1-THEN-c=213:c2=215-ELSE-IF
-a=2-THEN-c=143:c2=143:1=2-ELSE-IF-a=3-1
HEN-c=214:c2=212
HAHJ 200-IF-INKEY(8)=0-THEN-cx=cx-1
HAPI 210-IF-INKEY(1)=0-THEN-cx=cx+1
GAFJ 220-LOCATE-1,1:PRINT-CHR\$(11)
OAOO 230-PEN-3:PAPER-1:LOCATE-cx,25:PRINT-CHR
\$(255);:PAPER-0:PEN-1
EANK 240-LOCATE-minx,1
KANC 250-PRINT-CHR\$(c);STRING\$(1,143);CHR\$(c2
);
FAMN 260-IF-n MOD 3<0-THEN-290
ABAP 270-IF-a=1-THEN-PLOT(minx+1-2)*16,400,2
ELSE-PLOT(minx+1-1)*16,400,2
EAOJ 280-DRAW-16*(a-2),-16
GBOP 290-IF-RND<0.4-THEN-z=(RND*40)+1:IF-z<(mi
nx-2-OR-z>minx+6-THEN-LOCATE-z,1:PRINT-C
HR\$(254);
NAIF 300-IF-TEST((cx)*16,8)=0-AND-TEST((cx-5)
*16,8)<0-THEN-340
NAEL 310-IF-TEST((cx-2)*16,8)=0-AND-TEST((cx+
3)*16,8)<0-THEN-340
HAFL 320-IF-a=3-THEN-minx=minx+1
CAFK 330-GOTO-150
NAHL 340-LOCATE-1,1:PEN-3:PRINT-You ran off t
he road!
LAIX 350-PRINT-You scored;INT(n/4);points
IAME 360-FOR-a=1-TO-1000:a\$=INKEY\$:NEXT
CBAB 370-PRINT-PRINT-Press any key to try aga
in:CALL-&B18:RUN-60

L

Typing listings

If you've never typed in a listing from AA before, then reading the following blurb is a REALLY GOOD IDEA.

● Basically, all you need to do is make sure you type in exactly what we print EXCEPT the first four letters in each line.

● The first four letters are a code which work in conjunction with our unique and utterly excellent TypeChecker program below.

● Only press RETURN when you get to the end of a command line. If a command line goes on to two lines do not press RETURN at the break in the line. Your lines on screen should break in exactly the same place as they do in the mag.

● The dots you see in some lines (like the one between well and done in PRINT"Well done") indicate spaces. The dots are there so that you don't have to guess how many spaces to put in when there are more than one.

TypeChecker

This program lets you to check whether you've typed AA listings in correctly. Type it in, then SAVE it for future use. When you want to double check that you typed a listing in correctly:

● Load up TypeChecker.

● Type NEW.

● Type in the listing of your choice.

● When you've finished type LIST.

● At the end of every line a highlighted code will appear. It should correspond with the code printed in front of the same line in AA. If it doesn't you have typed in that line incorrectly.

PAML 10-'.TypeChecker.V1.0--By Simon Forrest
er--Dec.1992
MAOJ 20-'.For Amstrad Action--Public Domain
DANK 30-MEMORY-0FFFF
CAJK 40-csum=0
GAME 50-FOR-addr=&A000-TO-&A05E
DAKJ 60-READ-byte\$
GAJB 70-byte=VAL("&"+byte\$)
FACF 80-POKE-addr,byte
GAFB 90-csum=csum+byte
DALK 100-NEXT-addr
OACI 110-IF-csum<&2ADD-THEN-PRINT-Checksum-
Error:END
LAHE 115-POKE-&A001,PEEK-&BBSB:POKE-&A002,P
EEK-&BBSB
KAHI 120-POKE-&BBSA,&C3:POKE-&BBSB,&3:POKE-&B
BSC,&A0
MACN 130-PRINT-TypeChecker.V1.0-Installed:EN
D
MABC 140-DATA-CF,FE,93,FE,0A,CA,00,A0,F5,C5,D
5,E5,FE,0D,CA,22
LACJ 150-DATA-A0,5F,16,00,2A,5A,A0,19,22,5A,A
0,E1,D1,C1,F1,C3
LAFJ 160-DATA-00,A0,3E,20,CD,00,A0,3E,18,CD,0
0,A0,2A,5A,A0,7C
LADI 170-DATA-CD,45,A0,7D,CD,45,A0,3E,18,CD,0
0,A0,21,00,00,22
LACN 180-DATA-5A,A0,C3,1B,A0,F5,E6,0F,C6,41,C
D,00,A0,F1,E6,F0
KAJC 190-DATA-1F,1F,1F,1F,C6,41,CD,00,A0,C9,0
0,00,END

Turning TypeChecker off (it is automatically initialised when you RUN the program above) and back on again is quite simple:
POKE &BBSB,0 To turn it off
POKE &BBSB,3 To turn it back on again
Isn't science amazing? (Now don't argue.)

Earn some dosh

A wind of change has blown through the AA office, and this time it wasn't even Simon's fault. The smell of money is in the air once again, and what's more, with a little bit of effort, you can get your grubby hands on it.

All you have to do is send us a Basic program of your own concoction, better known as a type-in. It'll need to be good, though, if you want to get your hands on any of the money that's up for grabs. You'll have to do better than producing yet another bat'n'ball clone or simple disc organiser (we get plenty of them each month as it is) to qualify for financial reward. The best program printed each month will win the author the princely sum of ten new pounds (well it's princely for AA anyway), not to mention the fame and glory derived from an appearance in these

hallowed pages (we like to kid ourselves).

Anyway, if you want your program to be even considered for publication then there are a few basic guidelines you'll need to follow:

1 Keep it short. No-one can be bothered typing in a 500-line program, no matter how good it is. Neither are we going to use half the mag to print it. 5k would usually be the maximum, but we may consider programs of up to 8k if they're exceptional (we're talking really mega type-ins here though).

2 Please, please, please only send us programs on disc or tape. We much prefer discs - we always look at them before the tapes, so you'll be improving your chances if you send a disc. Any printed listings will just go straight into the bin.

3 Your program must be all your own work. Type-ins from the back of your CPC manual are definitely not acceptable - any further copies of Bomber (we got another this week) will join the listings in the bin.

4 If possible try to make sure that your program works on all CPCs. Your program will have less chance of being printed if it uses 6128-only commands, as we don't like printing programs that are useless to half our readers.

5 Please include all necessary documentation with your type-in. We've got very little patience so if we can't figure out how to use your program within about five seconds, it'll be hurled into the bin with great gusto.

So what are you waiting for? Get typing! Once you've finished your program, pop it in a jiffy bag and send it to:

Type-Ins, Amstrad Action, Future Publishing,
30 Monmouth Street, Bath, Avon BA1 2BW.

The Examiner

With a mighty roar of thunder and a flash of lightning that could be seen in four continents the great god Editor did decree that Debby Howard should once again go forth and produce two pages of adventuring news and reviews every month...

ARNOLD GOES TO SOMEWHERE ELSE

Second adventure in a set of five



Is it Rochdale or is it somewhere else... or is it both?

movements, which is dead handy for keeping yourself orientated (especially if you're one of those people who are too lazy to map).

Arnold Goes Somewhere Else is based on mythological characters and places like 'The Study Of The Sender Of Pestilence'. You will enjoy meeting such objects/characters as the Magic Mushroom and a Very Fat Goat but you don't need a vast knowledge of mythology to enjoy the game and complete the adventure. I would highly recommend all the Arnold adventures, and they're great for beginners.

The only drawback that I found was that "use (object)" seemed to be the solution to most of the problems – a little more imagination might have helped here. But since these adventures are all re-released versions, and still enjoyable, I suppose the author, Colin Harris, can be forgiven (I'm feeling generous).

82%

THE WISE AND FOOL OF ARNOLD BLACKWOOD

Third adventure in set of five

Price: Tape: £2 (£8 for all five Arnold adventures on one disc – you can only buy the full set of adventures on disc)

REVIEW

Distributor: WoW Software, 78 Radipole Lane, Dorset, DT4 9RS. Cheques/Postal Orders payable to: JG Pancott

Based in and around Rochdale (a Rochdale, however, which seems to exist in an alternative dimension – I wonder if the number 38 bus ever arrives on time in this version of reality?), *The Wise And Fool of Arnold Blackwood* tells a tale which starts with Annie going to the local Wimpy Bar to meet his boss, Lord Erebus. Once you've found him, he'll tell you what the real point of this adventure is – but trying to get the info out of him is a task in itself, so I won't go giving it all away here.

Like with *Arnold Goes Somewhere Else*, make sure that you have the volume level high enough so that you can hear the special sound effects which Colin Harris has included. The train journey and the Pepsi swilling are worth listening out for.

fondly referred to, Lord E). It seems that Lady E has run off with an occultist from Essex. Your task is to find her and also Lord E's deaf aid, tablets and amulet.

The only advice that Lord E gives you is that you should start looking for her near the entrance to the Stygian Shores (is that just along from Southend? – Dave). You also will need the help of a dragon before you attempt to cross the river Styx.

Like the other Arnold adventures *Somewhere Else* has been written in BASIC. There are some great sound effects, especially the one when you bury the dragon (it might not be quite what you expect). I'd suggest you check your volume level to make sure that you don't miss out on all the fun.

If you enjoy Simon Avery adventures you'll love the Arnold adventures, because they're similar in humour. One good feature of the games is that they print on screen your last 20 or so exit

As the title suggests you play the role of Arnold Blackwood, a private detective of sorts, who works for Lord Erebus (or, as he is

Lords & Ladies of Adventure

The adventuring aristocracy are a benign and benevolent lot. They may have solved the secrets of the toughest adventures known to man, beast or Jeremy Beadle, but they don't want to keep that knowledge to themselves; they want to share it. With you. So if you're stuck on one of the adventures listed below, then just contact the Lord or Lady listed as being an expert on that adventure, and they'll be willing to help you out. Be nice to them and you will be surprised how helpful they can be. If you're writing to them, don't forget to enclose a stamped, self-address envelope otherwise you won't get a reply.

- Virtually every Amstrad adventure ever – Joan Pancott ☎ 0305 784155
- Adult 2, Boredom, Can I Cheat Death?, Doomlords 1-3, Dungeon, Escape, Firestone, Jason and The Argonauts, River, Spacy, Tizpan, Welladay. – Stuart Mainland, 2 Douglas Road, Coyton, Ayr, KA6 6JJ.
- Avon, Forest At World's End, Hollywood Hi-Jinx, Kobashi Naru, Mordon's Quest, Scapeghost – Angela Allum, 22 Point Royal, Bracknell, RG12 7HW.
- Nightmare, Kobyashi Naru, Rebel Planet, Who's Afraid Of The Balrog? – Ross Younger, 3 Cammo Parkway, Edinburgh EH4 8EP.

CLUEPOT

This month's tips come from Peter Clark of Ipswich. I'll be reviewing some adventures that he's written in futures issues, but until let him prove his adventuring credentials with this little lot...

Jinxter

- You must get and wear the gloves before cutting the fence with the secateurs.
- Use the Pelican Charm from the bakery to bring the fire engine and the unicorn to life on the carrousel.
- Enter the clock maker's by knocking on the door (logical, really).
- Throw an object at the oil lamp to set fire to the shop.

Avon

- If you are put in jail a second time, you get a tone deaf jailer.
- In June, find the skull before going to see the witches.
- While wearing the ass's head, do something that asses do.
- Kiss the statue of the woman in the Chamber with the white pillars.



Not quite the Avon the author had in mind.

Adventurers' Chronicle

● Superb news for the Amstrad adventure scene this month – the Examiner is back up to two pages. Which means more reviews (at least two a month), and more clues and tips for those difficult adventures you've been stuck on for ages. We even have room for your letters, the latest news and special features. What I need and want from you is tons and tons of mail, I do read ALL your letters but owing to the lack of space previously, I haven't been able to feature many of them!

But now I can, so let me know what you would like to see on these pages ('pages' – ah, doesn't that sound so good?), because they're YOUR adventure pages. So if you would like to see more than two reviews a month or prefer to see more clues/tips or even maps just write and tell me.

And don't forget, if you've finished an adventure, write and ask to be put in the Lords and Ladies of Adventure section so that you can help out your fellow adventurers, as people have been doing since the very beginning of AA.

Remember the *Bard's Tale* club and the GAC clinic that the Balrog featured before he retired back to his cave? Well, I

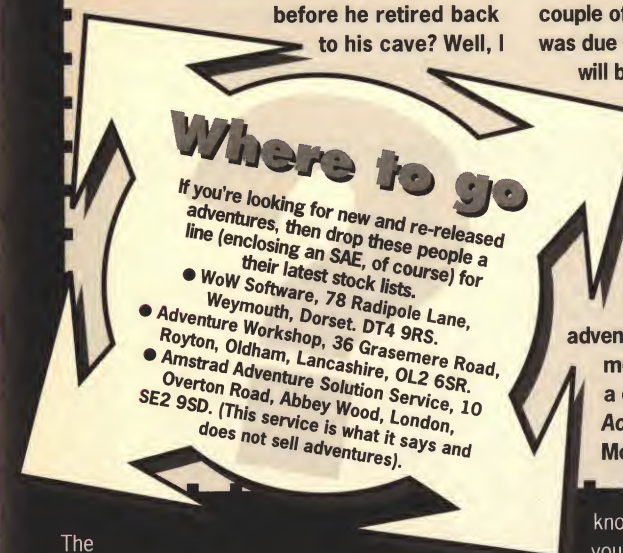
want ideas from you as to what we could do next! Don't forget that I will also welcome any tips and clues to the adventures you have played.

● The latest buzz going around the adventure scene is about the annual Adventurers Convention which will be held over a weekend in October Birmingham. This is your chance to meet face to face all those famous people you've heard about (famous? Oh, yes, I thought I saw Joan Pancott featured in *Hello!* last month – Dave). I'm planning to go this year, so you might even end up talking to me! We all wear name badges which does help you to know who to avoid... er, look out for.

Awards are given on the Saturday to homegrown software companies and for 'services to the adventure scene'. Plus, all the latest and greatest adventure software will be on sale.

I'll bring you up-to-date on the venue, date and how to apply for a ticket next month. ● Unfortunately the *Red Herring* adventure magazine that I reviewed a couple of months ago, has folded. This was due to low subscription numbers, and will be a sad loss to the adventure scene.

The only homegrown adventure magazine now running (and currently celebrating over 100 editions covering eight years) is *Adventure Probe*. But I would be interested in reading any homegrown fanzines that feature adventure columns; if you would like a mention and perhaps a review, send a copy to the Examiner, Amstrad Action, Future Publishing, 30 Monmouth Street, Bath BA1 2BW.



The sound effects certainly give these games that little bit of extra spark.

On your travels you'll meet such characters as Mexican Pete, who has no qualms about selling his most valued possessions if the price is right. But I hit upon one problem you'd be wise to remember. You'll come across a SUPERMARKET TROLLEY; if you examine it or try to do something else with it, it will only respond to the spelling TROLLY (illiterate authors are generally not a good idea in text adventures; illiterate players can cause problems too).

Apart from that, the only other gripe I had was that the game could have done with an AGAIN key to solve at least one of the puzzle (anyone who's familiar with PAW adventures, will

know that pressing the A key will repeat your last command, but since the Arnold games are written in BASIC they don't have such features). Also, another handy hint is to be sure to alter your body to fit obstacles that get in the way (what, like lopping your arms off or something? This sounds intriguing – Dave).

Like the other Arnold Blackwood adventures, *The Wise and Fool* is well worth the asking price.

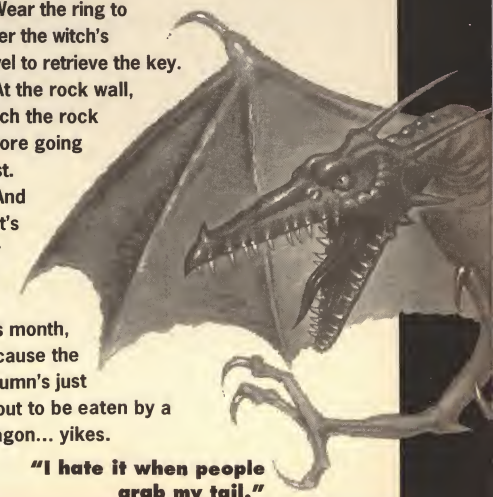
80%

If you have written any adventures you would like featured in AA please send them to The Examiner, Amstrad Action, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

Forest At World's End

- Blow your horn on the brink of the precipice to summon the dragon who will carry you to the bottom of the cliff.
- At the volcano, tie the rope to the rock and climb down.
- Wear the ring to enter the witch's hovel to retrieve the key.
- At the rock wall, touch the rock before going east.
- And that's yer lot for this month, because the column's just about to be eaten by a dragon... yikes.

"I hate it when people grab my tail."

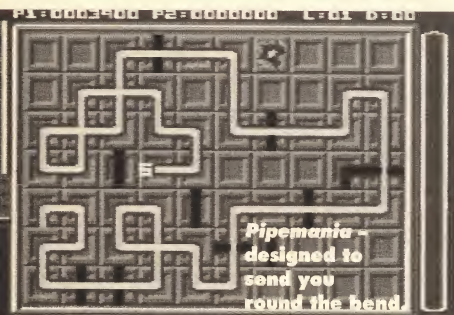


Cheat mode

So you like cheating, but typing in listings is just too much like hard work, yeah? Okay, just for you, here's a Cheat Mode special - absolutely no listings guaranteed...

PIPEMANIA

Plumbing the depth of despair with *Pipemania*? If central heating systems fill you with fear then here are the passwords which will raise the level of play and help you keep your head above water - or should that be gunge? FINE, NEWS, FAIL, SAIL, ERIC, TAPE, SLOW and ACHE.



STRIDER

If you aren't taking big enough strides into this game (these jokes are getting worse - Dave) press Z and O (zero) on the title screen. The border should flash. Then, while playing the game, press H to pause, and then SHIFT and 1 will advance you to the next stage (but don't try skipping the end-of-level guardian because the game will crash). SHIFT and O will restart the level you're on. Each time you use the cheat your lives and time are reset.

THE REAL GHOSTBUSTERS

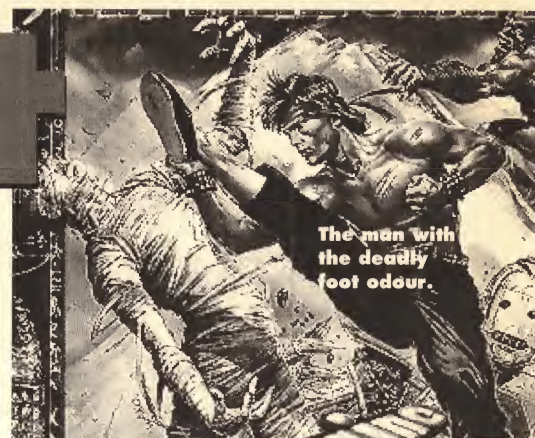
Who ya gonna call? Cheat Mode! Press the keys C H E A T (original or what?) at any time during play and you will advance to the next level and gain infinite lives.

RENEGADE 3

If you can't be bothered to fight your way through all those levels, why did you buy the game? Er, well, anyway, here's the solution for jumping between levels. When you get to the first menu, press Q and T together (do it a few times to make sure) and then start the game. Once the level is loaded press Q and T simultaneously again and you go to the next level.

X-OUT

To get as much money as you like simply go through go to get a ship, but instead of buying it, give it to Melob (bottom right of the select screen) - your score will increase each time you do so. Having done this a few times, you can buy as much as you like, but keep an eye on the score.



E-MOTION

Type MOONUNIT (was the author a Zappa fan?) on the title screen and then by pressing F you can restart 10 levels further on.

ITALIA 90



Okay, we should be onto USA '94 by now, but for the thousands of you who've got this classic footie sim here's a nifty cheat. If you press function key 6 during play, the ref blows the whistle and you can move straight into a penalty shoot-out.

Gary Linneker from the days when we made it the World Cup.

BLOODWYCH

A cheat for the game we'd love to get on our covertape (we're trying, believe us). Select a two-player game and choose parties for both players.

MYTH

A few tips that should make you a legend in your own, er, bedroom...

Stage 1

Numerous skulls will raise the demon of the fire. Fireball those uglies guarding the orbs. A bedevilled trident will see off the dragon. The dragon holds a key to the last orb.

Stage 2

Examine the statue for firepower. The statue of Perseus will bag you this stage. Run for your life after the doves. Pay your respects at the temple. Sword- and shield-play should get you past the Medusa. Get the old bag and she will help you head off the Hydra.



Stage 3

Hack and slash to get some firepower. Examine each container and collect the contents. Read the parchment and quench the flames. The Lady holds the key. Get close and the dragon will see your point. Make a bolt for Odin.

Stage 4

Pay your respects before you go under the arches. Visiting times are very important. The ankh is a symbol of eternal life. There are flaws in the floors, so watch out. Get the Mask of Tut and the Eye of the Pharaoh. Your mummy will tell you to save face. Give the Mask to King Tut when he rises.

Don't put your fingers in electric sockets.

When the game starts get player two's party to drop all their equipment and then kill them. Player one's party can then pick up all the equipment and sell everything that isn't needed.

You will start to go backwards - look at your score as the points add up.

OPERATION THUNDERBOLT

Enter EFI into the high score table and then, at any time, press the keys J, P and D and you will be transported to a higher level. Which, coincidentally, is not the sort of intelligence you need to play the game.

AA

HARD DRIVIN'

Take the stunt track, and when you get to the big bridge drive up to it slowly. When you get to the top slow down until it says 'turn key to start'.

FANTASY WORLD DIZZY

Our moral standards must be dropping - why else would we publish maps for this excellent (I refuse to use the obvious pun) Dizzy adventure in the same issue that it adorns our covertape? We really are making life too easy for you. Especially as we'll be printing the full solution in a couple of issue's time as well. What has happened to the art of actually playing games? I blame it all on the parents. And the teachers. And television. And asteroids crashing into Jupiter...

A GRAND DIZZY

B CROWBAR

C DOOR-KNOCKER

D PICK AXE

E HOLE

F COW

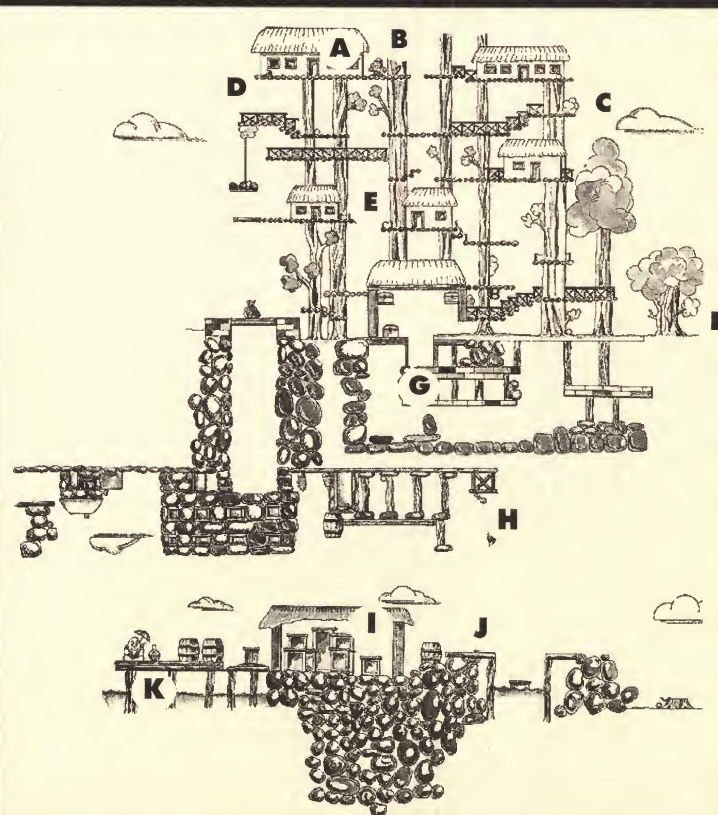
G CARPET

H KEY

I DOZY

J KEY

K POTION



A BEANSTALK

B DYLAN

C KEY

D EGG

E BUCKET

F BONE

G DENZIL AND ROPE

H BOULDER

I BOULDER

J BOULDER

K JUG OF WATER AND STALE BREAD

We're too good to you

And that's your lot for now. What do you mean, you want to know where all the coins are as well? You can blimmin' well work out where they are yourself (though here's a hint, there are quite a few of them in the clouds and loads of them hidden behind bushes and trees). What more do you want - blood? No, don't answer that.

Anyway, as I said earlier, there'll be a full solution coming along in a couple of months, but until then you're on your own. Go on, give it a try. You never know - you might even like trying to work out the puzzles all on your own.

Oh yeah, and by the way, if you've got any hints or cheats send 'em along to Cheat Mode, Amstrad Action, 30 Monmouth Street, Bath, Avon BA1 2BW,

CONT.
FROM
PAGE 24

onwards), mountain of software and blank disks. All must go. Send SSAE for list or £1200 (Are you sure you wanted that many noughts Ross? - Keith) the lot. Ross Younger, 3 Cammo Parkway, Edinburgh, EH4 8EP. Tel: 031 339 2336

CPC 464 keyboard and GT65 monitor with manual. £100 ono. Mr B. Stait, 7 Dunstall House Flats, Stow Road, Morten-In-Marsh, Glos., GL56 0DR.

CPC 6128 with colour monitor, multiface 2, joystick and 60+ games. Also nearly every AA from 17 to 106 and all AA tapes. £160 ono. J. Davies, 26 Marine Parade, Dovercourt, Harwich, Essex, CO12 3RD.

Pascal 80 Hisoft CP/M compiler/editor disc c/w manual. Offers. Ring Alex 0253 353024.

CPC 6128, colour monitor, DMP 2000 printer, Mini Office II, many games, all leads and manuals. Very good condition. £300. Phone Evan Cameron on 0444 414426.

CPC 464, colour monitor, £30. CPC 6128 Rom chip, £15. Dart Electronics light-pen, £15. Many utilities, games, books and mags. For details tel Julian: 081 876 5245.

CPC 6128 with colour monitor, lightpen, 40 AAs and over £500 worth of games, books etc. Also includes tapedeck and two joysticks. Offers phone Andrew (0354) 740882 anytime.

CPC 6128 with colour monitor, joystick, cassette player, original manual and lots of games, £130. Tel: 0934 812970 after 5:30 pm. Delivery may be arranged.

6128 keyboard, £35. 464 keyboard £25. MP2 coax, not scart, £25. MP3 TV modulator £25. Cruiser joystick £10. All include carriage. Tel: Brian on Dorset 0747 851029.

Tas-Sign for CPC6128 (disc). Sign/poster making program. As new, £20. F. Russell, 57 Brookside Close, S. Harrow, Middx., HA2 9AW.

3 Game Gear games. Prince of Persia, Columns and Ariel Assault. Bargain at £30 the lot or £10 each. Tel Robert: 081 575 2979.

464+ with monitor and several games. For sale or will swap for Amstrad compatible

printer. Mr. T. J. Ridge, 20 Oak Ave., Goole, Humberside, DN14 5UU.

150 Boxed tapes and 30 boxed discs with instructions. 40 unboxed tapes without instructions. All originals, all different (I think). £100 ono. Also, Brunword Elite Rom Module with 8-bit printer port and font and font editor. Word processor, page layout, database, on-line spell checker etc. Was £125, now only £50. Tel: Mr. Lee on 0487 814043 evenings.

3.5-inch second drive with leads and software, £40. Rombo Rom box with MAXAM, £15. AMX Mouse with Stop Press DTP, £15. Tel Ben: (0329) 661884.

CPC 6128 with colour monitor, tape, manual, joystick, loads of games (tape and disc) and light gun. £125 ono. Phone 0923 775 637 after 6pm.

CPC 464 with colour monitor, joystick, 50+ tapes, 30+ mags, £80 ovno. Also Sega Megadrive, 6 games, 2 joypads, Aviator 3 joystick, 30+ mags, 2 year guarantee, and adapter to run on CPC monitor (no sound), £100 ono. Tel: (0374) 404024.

Dark Force compilation for sale. Also Predator and HONG KONG PHOOEY. £5 for the lot. All gmaes on tape. Phone 0633 220139 and ask for Matthew.

Tapes: including Lemmings, 3D Construction Kit, from 50p. Cartridges £5 each. Lightgun plus 10 games £5. Andrew Wilson, 17 Pavilion Road, Arnold, Nottinghamshire NG5 8NL. Telephone 0602 202877.

OTHERS

Three weeks in Paradise by Microgen. What do I do with the blunt axe? (Why not ask Debby? See p.28 - Keith) Phone Michael on 081 994 8924.

I will swap Rick Dangerous 2, Football Manager 3 and Arkanoid (all cassette) for any good full-price game (on disc). Offers to: S. Rich, 7 Stewart Road, Harpenden, Herts, AL5 4QE.

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Go on, you know you want to. It's really easy. All you have to do is fill in this giving us your name, address and telephone number and then write your ad - one word to a box - in the grid at the bottom. Please put a contact telephone number or address in the ad itself; we will not print any details not given in the ad (we just need your address of phone number in the even of any queries).

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Large range of European stuff.

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Island, Hants, PO11 9BP.
3-inch disks only.

Colrob PD
9 Avimore Road, Hemlington,
Middlesbrough
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Demon
47 Milton Avenue, Hall Green,
Birmingham B28 0PE
3.5-inch discs available.

Disk PD
Lower Dextbeer, Dextbeer,
Holsworthy, Devon EX22 7LA.
0288 82348

GD PD
49 Woodville, Barnstaple,
Devon EX31 2HL

Image PD
Darren Dadds, 15 Elmwood Drive,
Ponteland, Newcastle-Upon-Tyne
NE20 9AQ
Also provides a digitising service.

MPD Software
Martin Elliot, 23 Nobes Avenue,
Bridgeway, Gosport, Hampshire PO13 0HS.
Subscribers to Potential Difference can get
half price PD.

PD Fun
41 Michaelgate, Kirkby Lonsdale,
Via Carnforth, Lancs LA6 2BE
A policy of 'no serious software'.

Sheepsoft
Paul Fairman, 298c Holto Road,
Barry, South Wales, CF6 6HW.

Sleepwalker PD
Disk software: Joe Moulding,
9 Meeting House Lane, Balsall
Common, Nr Coventry CV7 7FX

Tape PD
Paul Sillifant, Lower Dextbeer,
Dextbeer, Holsworthy, Devon
EX22 7LA.
Also get in touch if you're into PBMs.

The Vault
43 Windfield Gardens, Clybaun
Road, Galway, Ireland.
010 353 91 28204
Lots of European software.

Ultimate PD
26 Woodside Road, Irby, Wirral,
Merseyside L61 4UL
Specialises in 3-inch disk and tapes.

Fanzines

Amszine
Gayton, Laneside Road, New Mills,
Via Stockport, SK12 4LU
0663 744863

The Eliminator
14 Station Road, Riccall, York,
North Yorkshire YO4 6QJ

CPC User

0329 234291
The UAUG's fanzine.

CPC Undercover

37 Trimmingham Drive,
Brandesholme, Bury, Lancashire
A technically-minded fanzine that's also on
the look out for writers.

Ultra Games

20 Lancaster Terrace, Chester-Le-
Street, Co Durham, DH3 3NW
Cassette-based multi-format fanzine.

User Groups

Amstrad Contact

0403 753348
Sussex-based group that also runs a
technical helpline for CPC users.

UAUG (United
Amstrad User Group)

0329 234291
An AA-recommended user group.

WACCI

0602 725108
They're fab. Give 'em a ring.

Independent
Software
Companies

Campursoft

041 554 4735
You name it, they do it, really - take a look
at the interview in ish 96.

DMP Software

89 Wolverhampton Road, Codsall,
Wolverhampton WV8 1PL

New Age Software

01049-711-4201920
Responsible for ZapT/Balls, the excellent
Soundtrækker, and, hopefully, a few more
titles pretty soon.

Radical Software

081 856 8402
Still producing top-quality software for the CPC.

SD Microsystems

0760 720381
Specialists in business software.

Sentinel Software

081 876 7032
Suppliers of selected STS titles and a few
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Microform Fax: 0772 703131
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stuff like that.

WAVE

0229 829109
Suppliers of loads a good stuff - their ad is
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0257 421915
Fast friendly service, the ad says. And it's
right. They've got an impressively wide
variety of software on offer as well.

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0628 891101
Probably the largest selection of CPC
software for sale in the known universe.

Everglade

0463 240168
68 Telford Street, Inverness,
Scotland IV3 5LS
A new company in Inverness.

STS

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Barry, South Wales CF6 6HW
They're back - and selling Soft-Lok at £14.99.

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PO Box 7419, Garbutt,
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The largest supplier of software and CPC
bits'n'pieces in the southern hemisphere.

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They're offering loads of cut-price cartridges
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Great for cartridge and lightgun stuff.

Wizard Games 0723 376586
Games on every imaginable format.

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and repairs

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47-49 Railway Road, Leigh,
Lancashire WN7 4AA.
042 261866

They've been around for ages, guarantee a
fast turn-around, and must be a much better
bet than Avatar. Give 'em a go.

Star Driver

**Keith Woods checks out a
game that gives a new
angle to the racing genre...**

If you've been to the
arcades in the last year or
so you're bound to have
noticed a 3D racing game
called *Virtua Racing*. As well as
the normal view from the
cockpit, VR features a choice
of side and overhead views
from which to play.

Star Driver is a game with just one choice -
overhead. But at least it's not the view you
normally get in CPC racing games. You see
your car as a bird flying behind might see it.



This might sound weird but it actually works
quite well. The road stretches out over the
horizon, so you know exactly what's coming up
and have time to do something about it.

Ah, you know I said horizon? Well, there is a
catch here. Y'see you're not
racing on good old planet
Earth but rather a series of
asteroids. So the horizon
isn't that far off. This game
is definitely weird.

The action moves at
quite a pace and the road is
only slightly wider than the
car. This makes sticking to the tarmac a little
tricky, and since you lose a life every time you hit
the grass it's not long before you'll be seeing
"Game Over" stretched across the screen.



Isn't it embarrassing when you've got an
audience watching what you're doing?



Just in case you didn't realise that it was by
the same bloke who did *Masters of Space...*

Better
Than
Life

Now, however,
a group of Britain's most
infamous CPC characters have joined
forces to bring us a European-style
discipline devoted to the British CPC scene.
It incorporates the now defunct magazines

Presto News, *Grace Under Pressure* and *CPC
Attack*, and also, fascinatingly, *Keith Woods' Fan
Club*. Quite what form this will take is anybody's
guess, but since just about everything in this
discipline is written tongue-in-cheek, it should
make interesting reading.

Looking at the list of writers, you can be sure
that *Better Than Life* will be witty and irreverent,
and contain more than a little controversial
opinion, which, going on past fanzine form, will
have little basis in reality (who needs facts when
you've a crazy imagination?) and can't be taken
too seriously. However, lurking in between all the
fun you can be sure you'll find some useful CPC
info - most of these guys really know their stuff.

The code and presentation of the discipline,
written by Techy Forum's Richard Fairhurst, is up
to his usual high standards. Sensibly, the majority
of the overscan screen is left free for text. Control
is simplicity itself, so you're not likely to need to
use the instructions which are included.

STATISTIX

Game	<i>Star Driver</i>
Author	Stephen Lond Baker
Distributor	Radical Software 57 Lebrun Square Kidbrooke London SE3 9NS
Price	£7.95 tape/£9.95 disc

Adding to this difficulty is the tight time limit.
Strangely, you don't see it counting down, but
only find out if you've exceeded the limit at the
end of the level. It's a nasty surprise to discover
your game's over when you're congratulating
yourself for having reached the end in one piece.

Star Driver has been written by the same
chap who turned out last month's *Masters of
Space*. The preview version is only a first
draft but so far the main game code is
looking good, the 3D scrolling is impressive
and there's a interesting-looking two-player
mode, but the graphics and the design of
the roads still need some work. And we're
not convinced that losing a life every time
you leave the track is a good idea. But with
a bit of work on the level design and
presentation, the final game should
be well worth watching out for.
Cross your fingers.



Will the contents match the flashy presentation?

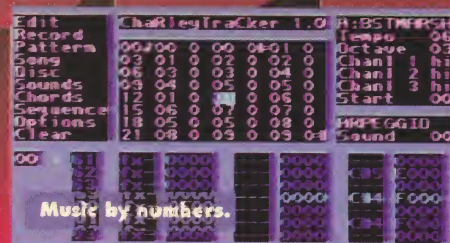
There's one novel feature - a little face that
moves in and out of a circle James Bond-style as
the disc is loading. It's anybody's guess as to
who it's supposed to be...

But will it match up to the quality of the
European disciplines? *Bad Mag* will certainly take
some beating. But it's a pretty sure bet
that it'll be streets ahead of any British
discipline we've seen.



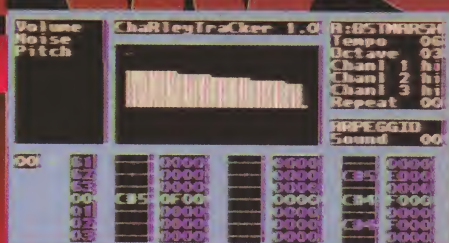
STATISTIX

Product	<i>Better Than Life</i>
Editors	Akira, CRTG, Hangman
Distributor	BTL, 298 Holton Road, Barry, South Glamorgan
Price	PD (well, almost)



The layout should be familiar to anyone who's ever used Soundtrakker...

But this is one lookalike that actually looks like it could improve on the original.



ChaRleyTraCker

If music be the food of love then Robot PD's ChaRleyTraCker is shaping up to be a feast you're going to adore. Keith Woods has a taste of the hors-d'oeuvres...

When the German music utility Soundtrakker was released about two years ago it was generally accepted that this was THE music-maker for the CPC. It scored a mighty 93 per cent in AA92 and since then virtually every tune in every program, including top full-price releases such as Prehistorik 2, has been written using Soundtrakker.

Never one to accept absolutes, and always one for a challenge, Richard Fairhurst set out to better Soundtrakker, and the result, ChaRleyTraCker, looks like it may be set to make as many waves as its rival did when it was first released.

At a first glance it's almost immediately clear that ChaRleyTraCker is not missing any of the features that made Soundtrakker so good. The usual editors, sequencers and arpeggios are all

there and tunes are created using the method common to all trackers – sticking together a load of numbers in some sort of vaguely sensible order. It's all very familiar stuff and anyone who has used any other tracker won't have any trouble using this one.

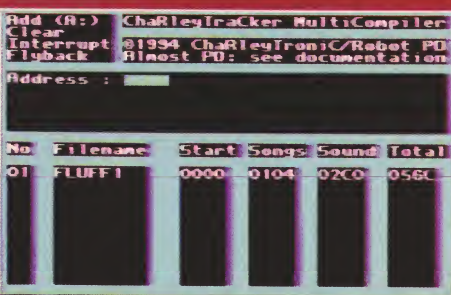


I can remember the days when Rolf Harris's Stylophone® was the height of musical technology.

But ChaRleyTraCker is no mere cut-price, carbon copy of Soundtrakker. As soon as you put the program to some serious use, you begin to see the differences. Forget differences, make that improvements. First, ChaRleyTraCker manages to be even more user-friendly than its predecessors. Thanks to the user-friendly menu and helpful graphics and sensible keys

presses it's easy to get to grips with the program without any reference to a manual (as this was a preview version we still haven't seen a manual, but that didn't hinder us one bit). Neither will you need the manual to look for hardware envelopes, because ChaRleyTraCker does that for you.

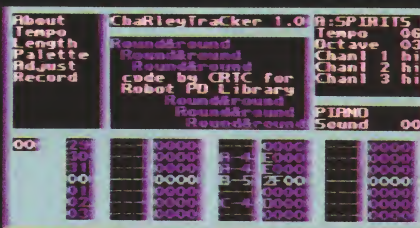
The most strikingly original feature to the program is the sound effects generator. Sound effects can be designed using the same system as is used for normal sounds, and can be dubbed over music, even while it's playing. If used effectively, this function could add a great deal more variety to CPC-generated tunes.



Who needs Erasure when you can make electronic widdly-bonk noises yourself?

From a technical point of view, the most interesting aspect of ChaRleyTraCker is that it by-passes the standard CPC firmware and uses its own custom sound generation code. This is particularly useful for anyone who wants to use their sounds in their own productions because most games and demos run with the firmware disabled. It also offers the possibility for sounds without pitch effects. However, anyone writing a program that still uses the standard firmware needn't worry – according to Richard ChaRleyTraCker tunes will coexist happily with any program (you can bet Richard will now be inundated with letters to Techy Forum from people who've found programs it won't work with, just to prove you wrong).

One of the most surprising things is that all these extra features don't eat into the memory available for the tunes. ChaRleyTraCker uses less memory than any other tracker thanks to its compact code and the fact that its ability to compile up to 10 tunes at once removes the need to have a driver present twice in memory.



The best thing about it is the price tag.

But best of all...

The most remarkable feature about this program, however, is the price. Whereas Soundtrakker retailed for £25, a price which was considered worthy of such a program and which many people were prepared to pay, Richard is prepared to offer ChaRleyTraCker for the ridiculously small sum

of only £2.25. This includes the price of the disc, but you will have to pay a few pence extra for the postage (hardly a major hardship).

This is less than a tenth of the price of Soundtrakker, stunning value when you consider ChaRleyTraCker has virtually the same features. However, we'll have to wait for the finished version before we can say with certainty whether Soundtrakker retains its crown, or if ChaRleyTraCker's the new king.

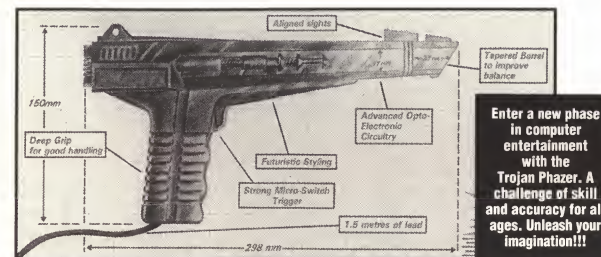
STATISTIX

Game
Author
Distributor
Price

ChaRleyTraCker
Richard Fairhurst
Robot PD
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Rutland, LE15 6HF
£2.25

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